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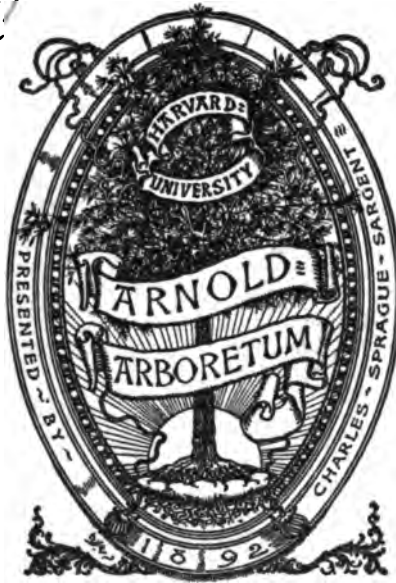
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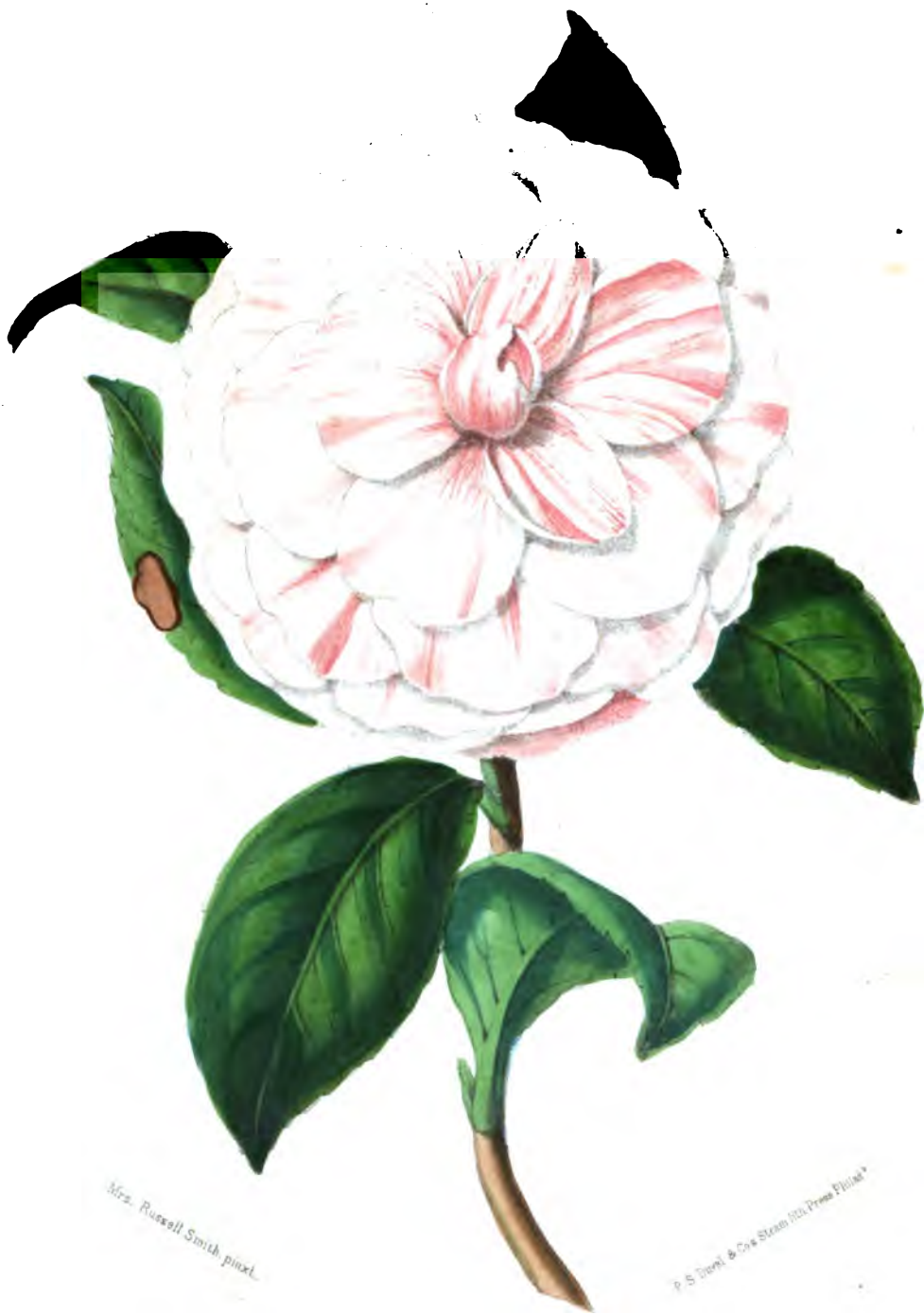
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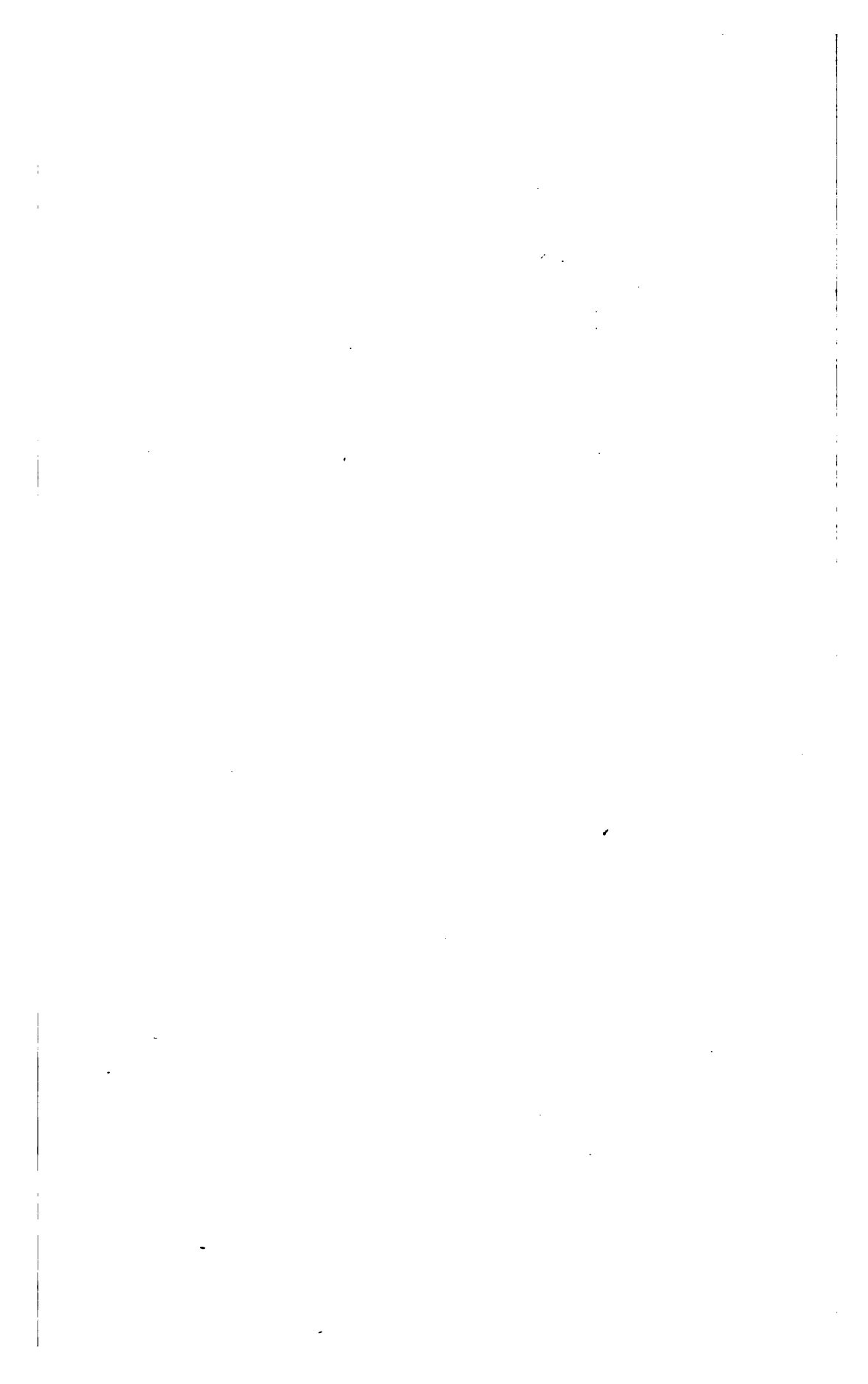
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Mrs. Cope.





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THE

FLORIST

AND

HORTICULTURAL JOURNAL,

A MONTHLY MAGAZINE OF

**Horticulture, Agriculture, Botany, Agricultural
Chemistry, Entomology, &c.**

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THE FLORIST

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[No. 1.

CAMELLIA—MRS. COPE.

ETYM.—CAMELLI, an Italian Jesuit, or according to others, G. CAMELLUS, a Moravian Jesuit, a traveller in Asia, and author of a history of plants of the island of Lucon.

Ternstrœmiaceæ & Camelliæ.—Monodelphia-Polyandria.

CHARAC. GENER.—*Calycis* bracteolati 5-9-phylli *foliolis* 2 3-seriatim imbricatis, interioribus sensim majoribus deciduis. *Corollæ* *petala* 5-7 hypogyna imbricata, interiora majora. *Stamina* plurima hypogyna pluriseriata sæpe imis *petalis* adhærentia basi plus minus interse cohærentia, *filamentis* subulatis, *antheris* incumbentibus bilocularibus oblongis, *connectivo* crassiusculo, *loculis* longitudinaliter dehiscentibus. *Ovarium* liberum 3-5-loculare. *Ovula* in loculis 4-5, angulo centrali alternatim inserta pendula. *Stylus* 3-5-fidus; *stigmatibus* capitellatis. *Capsula* 3-5-locularis indehiscens loculicide 3-5-valvis, *valvis* medio septiferis, axi centrali persistente faciebus seminiferis. *Semina* in loculis abortu solitaria rarius gemina inversa, *testa* nucamentacea, umbilico apicali impresso. *Embryonis* exalbuminosi *cotyledones* crassæ carnosæ inæquales, *radicula* brevissima supera.

Frutices sempervirentes Asia australis plagam orientalem incolentes ob latissimum florum decorem magnis adonistarum studiis merito celebratæ, foliis alternis petiolatis coriaceis nitidis integerrimis, gemmis magnis perulis distiche imbricatis tectis, floribus axillaribus et terminalibus speciosissimis albis roseis v. purpureis.

CHARACT. SPEC. — E typo communi *C. japonica*, varietas in horto Sherwoodiano enata.

The term florist flower, so often used amongst horticultural people, needs explanation to readers generally: It is applied to hybrids, or varieties of any flower obtained by crossing, in contradistinction to species. The florist flower is a mule, incapable, as all other hybrids are, of reproducing itself by seed, or at least of continuing the same for any length of time. The fine and numberless varieties of *Dahlia*, of *Camellia*, of *Fuchsia*, *Carnation*, *Verbena*, &c., are the most familiar examples.

It is, in a great measure, to these abortions that we are indebted for the choicest beauties of our gardens and greenhouses. The *Dahlia*, from a tawdry, illshaped flower, has become beautiful in form and color. The single red *Camellia* is one of the parents of the splendid varieties with which we are familiar. Compare the first *Fuchsias* which were known to us, the *coccinea* and *globosa*, with the size and coloring of *Fair Rosamond* and *Don Giovanni*, and what an advance has been made!

There are some fastidious and hypercritical people who condemn these varieties as departures from nature—as an interference of art; to these we have a most opportune reply. In the appendix, written by a scholar of Trinity, Cambridge, to the “Account of the British colonization of New Zealand, the writer says, “There may be those who would look with apprehension on any intermixture of foreigners with the native race, from its supposed tendency to obliterate a peculiar and interesting variety of the human species * * * This feeling is natural and amiable, but it partakes of the gentle prejudice of Perdita, in expressing her distaste for the “piedness” or variegated character of carnations and other flowers, which she acknowledges to be the fairest of the season, but refuses to admit into her garden. Polixenes, to whom her conversation is addressed, inquires—

Wherefore, gentle maiden,
Do you neglect them?

Perdita. For I have heard it said,
There is an art, which, in their piedness, shares
With great creating nature.

Polixenes. Say there be,
Yet nature is made better by no mean,
But nature makes that mean; so, o’er that art
Which you say adds to nature, is an art
That nature makes. You see, sweet maid, we marry
A gentler scion to the wildest stock,
And make conceive a bark of baser kind
By bud of noble race; this is an art
Which does mend nature, change it rather; but
The art itself is nature. *Winter’s Tale, Act IV. Scene 3.*

* * * God has so fashioned man as to empower man to fashion nature; and so to fashion nature as to draw from her hidden elements forms of far greater beauty and utility than in her present state of imperfection are offered to us by nature herself. It would be difficult to select a fruit, a grain or a vegetable which has not been raised to its present value by artificial means; and wherever we turn we are reminded of the wonders which are effected in the floral kingdom by modern horticulture.” Who would prefer the common crab to the pippin or bellefleur; the insignificant fruit of

the amygdalus to the delicious peach? or any of the farinaceous grasses to the flour of wheat? Yet these have all departed from their original species, and have arrived at their present state of usefulness and pleasantness by human care. The perfection to which the hybridization of flowers may arrive can hardly be guessed at; the varieties of some plants are already beyond calculation; but there are many which are abandoned or neglected, as they are surpassed or improved upon, so that the numbers will always be kept within certain bounds; besides, the widening of the gardening world increases the field, as the increasing extent of country brought under the influence of civilization affords room for the increase of the human race. What is produced in Europe is admired, is the fashion, "struts its hour," and is passed over to us; by the time it is introduced to the remotest points of our country it is old in our neighborhood, and is ready to be pushed aside for the next novelty. This is not true however, of all varieties: the double white Camellia which was introduced into England from China, where hybridization seems to have originated, nearly a century ago, is still the most favorite of its genus; so with others which have become standard favorites

The flower of which we give a representation in this present number, is one of those hybrids of the Camellia which have gained for Philadelphia a great reputation in the horticultural world. It was obtained from seed by Mr. John Sherwood, who has been the successful raiser of many fine seedlings, and by him dedicated to the late Mrs. Cope. It is certainly a flower which will take its place in the very first rank, among the productions of both the old and the new world. Our picture, which was faithfully and skilfully drawn from nature by Mrs. Russell Smith, is of a rather immature flower, the full-blown one appearing to much greater advantage as regards form, the imbrication of the petals being more perfect; the color is unsurpassed in delicacy, and resembles in tone and markings the varieties Duchess of Orleans, (of which it is difficult to obtain a good flower, on account of its inability to expand,) and Low's Alexina, which is inferior to our flower in delicacy. We can predict for it a continued favor. The stock is in the possession of Messrs. Buist, of Rosedale, and Ritchie, of Kensington.

H.C.H.

HISTORY AND MANAGEMENT OF THE CAMELLIA.

The Camellia, according to Loudon, was named by the Father of Botany, Linnæus, in honor of George Joseph Kamel or Camellus, a Jesuit. There is a beautiful fitness in the name for such a beautiful plant. The Jesuit is considered by the body of men whose cause he upholds, their ornament and their pride—the Camellia is considered by the admirers of flowers as one of their choicest objects of admiration. It is a native of Japan and China, though more common in the former than in the latter. There it grows to a very lofty tree, and is planted everywhere in their gardens for ornament—and in their groves and walks for shade and shelter. It must be a beautiful sight to see an avenue of Camellias as large as silver maples, with their deep glossy foliage and flowers of every hue, from the purest white to the richest crimson. Still though we may envy the Japanese the magnificence of their specimens, we may well be proud of the innumerable fine and splendid varieties which our superior skill in horticulture has produced. In China it is also extensively cultivated, and most of the varieties originally in cultivation were imported from there. The date of its introduction to England is recorded as 1739, and I presume that for a long time afterwards the number of varieties was very limited. In one of the most popular histories of gardening, published in 1800, I find, in a history and description of the plant, the mere notice that “There are varieties of it in cultivation with single red and purple flowers, with double red and purple flowers, with single white flowers, and double white flowers;” from which comparatively brief notice I conclude that there were very few varieties, and these little known or cared for at that time. Most of those introduced from China at that time were received between that period and 1820, after which many fine seedlings were let out by the English nurserymen. About this period, Chandler, of Vauxhall, near London, began to establish himself as the greatest grower and raiser of new kinds of the age; he published figures of his new kinds as they appeared; one of the first was *eximia*, and so great has been the change, so rapid the improvement, that it is very rarely indeed that we can find a plant in any collection. I have met lately with one single plant in an extensive

Philadelphia collection, but it was like gazing for an instant on the Daguerrotype of a long lost friend. About 1824 the *imbricata* was introduced by the Dutch nurserymen from China, and it is more than probable that the singular, and to this day unequalled beauty of this variety gave to Camellia growing the increased impulse which commenced a few years after. Since 1840 new varieties have sprung up like mushrooms, both in rapidity and the multitudinous nature of their various forms. Low in England, Van Houtte in Belgium, and many of the Paris nurserymen, seem to have placed Chandler completely in the shade, and have for some years been the ruling spirits of Camellia development.

In our own country the spirit of improvement has been still more surprising; our seedlings have obtained a reputation even in the old world almost as great as their old Chinese prototypes; and by means principally of this plant the names of our nurserymen are as familiar as household words. This is the case with Boll, Hogg and Dunlap of New York; Smith, Buist, Ritchie and Dick, of Philadelphia, and Feast of Baltimore—all of whom have an European reputation amongst Camellia raisers of the highest eminence. We cannot, perhaps, boast of giving to the over six hundred varieties which make up the total of European collections, the greater portion of its number; but we can point to some of our varieties as being among the brightest stars in their floral firmament; their very "*Reine des Camellias*,"—the Duchess of Orleans—with all the regal dignity attached to its name, is in danger of being superceded by a plain "citizen." A specimen bloom of a seedling, by Mr. John Sherwood, and named Mrs. Cope, was exhibited at the Pennsylvania Horticultural Society's rooms, in the early part of this season, and gave full promise of bearing the character I have just sketched out for it.

Having thus given a brief outline of the history of the Camellia, I proceed to treat similarly of its cultivation.

SOIL.—There are many opinions as to the best soil for Camellias; some, especially the French gardeners, go in strongly for loam—others, chiefly German, will be perfectly well satisfied with a brown hazelly loam; others, again, mostly British, require a "mixture of peat, loam and sand." The probability is, that in the hands of a good gardener, in a house, and in good conditions, any of the mentioned soils is as good as another. Climate has much to do

with the choice of a plant. A dry and hot climate is very hard on plants grown in peat, or undecomposed leaf mould. The constant supply of water necessary to replace that loss by evaporation, joined to the dry heat, to which the soil is alternately exposed, causes the vegetable matter in it to decompose very rapidly, during which an acid is produced which sours the soil, and probably acts very injuriously. Thus it follows, that a soil which is adapted to a *Camellia* in one country, or circumstances, is not by any means fit for all. But the principle of the thing being understood, the reader will vary his soils to suit his locality, or the conditions under which he is called upon to grow his plants. I have found my *Camellias* to thrive best in a soil having for its basis a brown hazelly loam, in this I put about a fourth part of turfy peat, or if this is not at hand, about the same quantity of well decomposed sandy leaf mould, at least three years old. Whatever proportions of any soil be adopted, nothing rich or rank should be amongst them, as rich manures of every kind have been found highly injurious.

POTTING.—A subject which usually receives much minute attention from writers, but which is not of so much importance as the soil and after management. While the plant makes fine luxuriant shoots it requires no potting, unless the pots should become crowded by roots. When there is a tendency of the growth to become weaker than it has formerly been, and the pot is at the same time well filled with roots, it is advantageous to re-pot them. The best time in my estimation for this operation is, when the flowering is nearly over, and the new growth about to commence. I have always found them do well shifting by at this period. Many have a settled habit of “going over” their plants regularly the “first week in February;” more frequently because the time has arrived, than because the plants really require it. When the reason or principles of an operation are understood, its position in gardening becomes a branch of science; then times and seasons follow from the wants and requirements of the plant, rather than the day or month of the year.—The importance of draining all plants well is so generally understood, that it is scarcely necessary to observe that the *Camellia* is no exception. A portion of charcoal, with the potsherds used for

draining, is very useful; the roots love to adhere to it, probably on account of the moisture charcoal absorbs. The material for drainage is frequently thrown in too carelessly; flat pieces falling on the hole, and rendering the passage out of the water impossible. A large hollow piece should be chosen to cover the hole; then a few large ones placed around it; a quantity of pieces broken much smaller then being placed over, the whole covered lightly with moss to prevent the soil from getting amongst the sherds; this forms a good drainage. In placing the plants in the new pot, no person will bury the stem deeper in the soil than it was before.— We now come to the general management.

THE HOUSE.—The best aspect for this, is like the best soil for them, a much debated subject. In a late volume of the "Companion to the Flower Garden," I observe that one writer insists on the advantages his plants derived from being placed in a shady situation on a northern aspect in summer, while another describes the luxuriant and healthy specimens he got by placing them in the full sun, under a south wall! In America this latter mode would never do. In a well constructed house a northern aspect is perhaps as good as any; it admits a large amount of light, while it prevents the plants from having their leaves scorched by a sudden burst of sun in winter or early spring. Arrangements should be made for keeping the house above 36° or 40° in the severest weather; a common well made flue will be effectual where the house is small, but wherever the size of the house will warrant it, hot water pipes are much better, as the best constructed flue will allow injurious gases to escape at times, more especially where anthracite is used as fuel.

FALL AND WINTER MANAGEMENT.— I prefer to have my plants all housed before the thermometer falls often below 40°. A Camellia properly hardened will bear a much greater degree of cold than this; but as Cobbet would say, "the above is my plan," and it does well. After they are housed I give them all the air possible, so long as I can keep the temperature from falling below what I have fixed; I thin out the flower buds according to the strength of the plants, never, however, leaving more than one at the point of a shoot. I give them no more water at this time than will keep the soil barely moist and the buds just swelling; caution is required in this, as, if the soil

become quite dry the buds will drop. As the buds swell the water must be increased, and when the flowers are expanding they will require a pretty free supply. As they cease flowering and commence to grow, I keep the atmosphere moister by throwing water about on the paths and stages, and by giving the plants an occasional syringing in the mornings preceding a fine warm day; whenever warm enough I give air by the top sashes only, deeming the opening of doors and side sashes as admitting currents of air highly injurious to the young wood. If, as they show, some grow stronger than others on the same tree, thereby spoiling any desired proportion, I pinch them back half way—I invariably find that pinching back a growing shoot weakens it, while the other unpinched off shoots are strengthened thereby. As soon as the weather out of doors ceases to be changeable, I make preparations for

SUMMER AND FALL MANAGEMENT. — Here again “doctors differ,” — many preferring to keep them housed all summer, giving them an abundance of air, and keeping them shaded; others advocating their being “turned out of house,” if not home, “about the first of May,” under some shady tree or some such situation. The first contend that by housing their plants, they protect them from the heavy summer rains which often injure them, especially if the drainage get defective. The other party contending that when the plants are out of doors, insects do not attack them so freely, and when they do at all, they are more easily cleaned and kept clean. As the full benefit of the air is no doubt of the highest importance to the perfection of *Camellia* growing, I prefer to have the plants out in summer under an awning made for them, with all the sides open; this, while it affords them all the air possible, prevents the heavy rains from injuring them, while they are easily cleaned when infested by insects.

INSECTS. — The most injurious are the *scale* and *red spider* — lime water syringed over the plants will easily kill the former; the latter more troublesome pest requires constant watching; the best thing, I believe, for destroying them is soapsuds—many excellent cultivators around Philadelphia use it, while others equally good object to it, on the ground that it stops up the pores which abound on the under surface of the leaf; but I have never found it injurious, and presume that the thin membrane-like coat, which adheres to the plant after the washing, cracks and peels off when it dries soon after.

A PHILADELPHIA GARDENER.

For the Florist, and Horticultural Journal.

ELVASTON CASTLE,

The seat of the Earl of Harrington, near Derby, is the most celebrated place in Europe for its profusion of evergreen trees and shrubs of every class—if there exists a hardy evergreen, it is enough, it is soon deposited within the domain of this noted modern planter. When I visited it in 1831, to see my youthful friend, Mr. Barron, who had then entered as gardener, I noted the place only for its long level avenues of lindens and chestnuts that had apparently stood the blasts of the past century. A noted landscape planter was invited by the grandfather of the late Earl to improve the grounds, but considered them so tame and level that nothing could be done. There were then half a dozen cedars of Lebanon planted, which were the only evergreen trees of character on the place. The late Mr. Loudon, in his garden statistics about 1829-'30, did not even notice it. The house is of the plainest character, with all the appendages of the establishment in conjunction with it; and strange to say, the parish church in juxtaposition—a plain sheet of water and ancient flower garden, with hedges of yew and laurel, formed the picturesque of this now noted spot, in the above year. How changed the scene—the cool, collected and ingenious talent of the gardener, backed by the Earl's wealth and will, with a determination to produce what he had so long desired, has resulted in so short a period with what no other has yet achieved, even with nature in all its grandeur at their command. The whole has been produced so quietly and privately that comparatively few have yet realised a solitary view, unless taken from the top of the church, as was done by our lamented friend Mr. Downing, or on a few special occasions granted by his lordship. The sequel feebly shows what twenty years have done—the whole feature of the place is decidedly EVERGREEN; so that the grand avenue of lindens gives way to rows of Deodar cedars, Douglas fir, and Austrian pine, till you approach within half a mile of the mansion, where there is an enclosure by a ha-ha or sunk fence, within which you enter by massive gilded iron gates; on the right the column is covered with the silver ivy, and on the left the lodge is embedded in mantles of the green.—

So striking a contrast could not be overlooked. You are now within the paddock, in a serpentine approach planted on right and left with variegated holly, backed with cember pine, whose sombre shade formed a striking contrast with the pale variegations of the holly. The next turning opened on beds of heather, beautifully in bloom, interspersed with boxwood and sheltered by towering specimens of Douglas fir and cedars of Lebanon, whose tops are grafted with Deodars, the dark green of the former contrasting with the soft green of the latter—you could not resist the impression of the trees being covered with sea green silken mantlets. Another turning places the winter garden on the left, and brings you up in front of the mansion, from which you have a full view of the Winter Garden and Mount of Pleasure, that has no equal in Victoria's dominions, or perhaps any other country—a covered walk of several hundred yards. You cross its portals, and figure to your mind's eye an old bushy yew tree that had been growing for centuries before its removal to its present site eighteen years ago, forming now a beautiful artistically clipt arbour, fourteen feet square and eighteen high, perfect every inch, not a branch nor twig out of place, surmounted by two peacocks formed on the top of each other, and over them cast two rings, all formed with the shears, and perhaps cost as much as any of the architectural churches of Philadelphia. The Irish yew stands in regimental phalanx about eight feet high, grafted with the *Taxus aurea* formed into crowns, and shining in the sun as if burnished with gold, the Swedish and Irish juniper forming boundaries of various tints of green and worked up into masses, creating by contrast of color and disposition of dwarfer variegations of foliage, habit and form. The prevailing character of the forms were to produce a parterre with colors so contrasted as to strike the eye, producing an impression surpassing any floral arrangement which was readily accomplished with every imaginable shade. For example—take a half-circle or crescent, and plant the disc with dark upright sombre yew or juniper, and the concave with variegated plants such as *Vinca*, thyme or *Santolina*, and you have at once a winter bouquet.

To enter into a detail would however far outstrip my time and the patience of your readers; we give the outline, and leave them

to form the picture. The gilding of the statuary, the elaborate work of the baskets surrounding some cherished novelty, the feathered declivity of the embankments, the terraces and slopes, the plains and the mounts—all exhibit an artistic skill fascinating in the extreme. What is this surrounded with such beautiful wickerwork? "*Libocedrus chilensis*, a great acquisition."—It looks like a beautiful silver *Thuja*. "O yes; you may call it *Thuja chiliensis*." There is another exquisite plant, "That is *Biota aurea*;" Ah! very like a *Thuja*, too? "Yes, *Thuja aurea*." There, you see, I have got fixed in a lybranth of names and art. What peculiar shaped pine is that? "A Douglas Fir." Ah, you have been using the knife on it? "Yes; and on many others freely. I exploded the idea that evergreens will not bear pruning; do it at the proper time, and judiciously, they are with few exceptions, perfectly under control." I thought Douglas fir an exception, and was only handsome from seed? "Of all the magnificent specimens on the place there are only about half a dozen seedlings!" *Make a note of that.*

From the east front of the house the east avenue extends ten miles in a straight uninterrupted view, which is not used as an entrance but merely as a prospect; a walk of about thirty feet wide extends half a mile, or as far as the ha-ha; within this space the majestic horse chestnut has been replaced by *Araucaria imbricata*, *Cryptomeria japonica*, *Taxodium sempervirens*, Decdars, Cedars of Lebanon, and *Picea pinsapo*, disposed with a gracefully waved outline. As you enter this amazing vista you have on your right and left specimens of *Picea nobilis*, each ten feet high, and about the largest in England, and grown from cuttings planted when three inches high, of the most symmetrical form and without a fault, surpassing in beauty the far-famed *Araucaria excelsa*. Onward are beautiful trees of *Araucaria imbricata*, thirty feet high, planted on mounds, and clothed to the bottom with their distinct and unique foliage and habit. These trees have been sixteen years planted, so that their average growth has been nearly two feet. Next came the *Cryptomeria*, with its graceful airy form and pendulous branchlets contrasting with the stiff habit and upright mean of the *arau-caria*. How grand! how expansive—what will it attain?—Shall I see it again in twenty years? To the left of this prospect and en-

tirely unobserved, is the tame sheet of water of 1831, now a magical lake interspersed with islands, peninsulas, promontories and steepes of the most verdant grass—artificial rockwork, pallisades and geological formations, all having been brought many miles to adorn this secluded spot, to which you are gently drawn by the musical whisperings of a secluded waterfall. In your search you cast your eye on the vista of Spondon, the church with its towering spire three miles across the lake, forms the termination of this picturesque view ; at your feet is a beautiful boat with its golden oars, in which we paddled from island to island, viewing and comparing the growth of trees, the formation of artificial rocks, and the design of the planter, where the towering Douglas and Norway firs were flanked by our hemlock spruce, which makes an agreeable tree for rocky and water scenes, its delicate foliage and drooping branches kissing the ripple of the silver lake, adding new charms to the scene, in beholding one of our most common trees luxuriating in those fairy isles with native splendour. Those trees were not planted on low mud islands, but on high artificial hills, nearly every foot of which had cost a shilling to the spirited owner, whose great delight was to employ the poor to raise the objects of his fancy. His sole pleasure was planning, planting and replanting—cost was rarely estimated, the question was, can it be done ? On the margins and inlets of this romantic sheet of water great effect was produced by the shades of foliage, the Austrian, Corsican and Norway pines gave dark shades, the Silver, Bhotan and Sabin give light shades ; the Khutrow, cembrian and insignis giving the green shades, with an occasional yew whose history went back into other centuries, gave a tone of ancient and modern grandeur that must be seen to be fully realized.

On the south of the lake and very near the mansion, is formed a grotto and fountain, where all the gems of dwarf trees, lava and rocks are collected and rather systematically arranged, which appears to have been the prevailing taste of his lordship. How wonderful are the productions of the vegetable kingdom ! and they can only be compared in collections thus brought together. We have been admiring the rapid growth of many of the firs and pines, frequently exceedingly five feet in one season. What are we now to say of those miniature, less than Tom Thumb affairs, of those clanbrasil,

pigmy and Hudson firs, some of which were twenty years old, and had not attained the height of as many inches. The view from this point across the lake was on the artificial ruins of an old castle composed of rocks, pieces of buildings, tufa and limestone formations, covered with ivy and wild flowers, all erected within fourteen years, and appeared as having stood for ages on a spot that was a low meadow at my last visit. All the walks in the vicinity of this lake and indeed for miles, were asphalted, composed of four parts gravel and one part quick-lime and gas tar sufficient to make the whole the consistency of mortar, which was heated on plates built for the purpose and laid down whilst hot, about two inches thick, and become as hard as marble. So much was I absorbed with what I could barely realise to be real, that 10½ of the night found me under the soft silver beams of the moon, with nature's cravings, still enjoying those magical scenes where I saw but yesterday, comparatively, the muddy pool skirting the field of the mower. I retired to rest, but found none for my excited imagination; the early dawn (2½ o'clock) found me solitary and alone amidst the golden-crowned yews of the winter garden—not altogether alone, I find, for there comes that silent watchman of the night, who has trod the path for seventeen years, amongst those, to him no doubt, monotonous scenes.

The thorough secret of the successful growth of all I have seen, consists in a complete system of under-draining; the ground being so level the main drain had to be extended 1½ miles in a direct line. All the leading trees were planted on mounds of earth—no tree was too large to remove and none too small to plant; every power and facility was on the spot; all fibrous roots were sacredly protected; during removal copious waterings were given; stays of strong No. 8 wire were fixed from the ground to various parts of the tree, to prevent its being displaced after planting; evergreens were successfully moved at all times, but preference given just before their growth. Even a yew that had stood 300 years, was successfully brought from a distance, and the second year after removal made a luxuriant growth; another striking fact was, to plant the best that could be got; from three inches to three feet high, were the general height of all those now unique specimens of rare evergreens. Seedlings, cuttings, layers or grafts, all were alike acceptable; if they were not of the proper form, the knife was freely applied; where the

roots had been confined in pots before planting they were washed from the old soil, the roots carefully extended, fresh soil placed amongst them, freely watered a few times, and success was the result. The most critical judges cannot now decide whether they were seedlings or not. I will now close with one word more: The whole art and energy has not been fully and entirely directed during the time to the one grand achievement of a Pine tree evergreen—pleasure ground and winter garden. There is a fruit and vegetable garden with graperies, peach houses, forcing houses, pine pits, hot and cold walls, and all their accompaniments kept in corresponding order, flourishing and fruitful; but these are every day affairs.—The achievements in the grounds and the planting, their growth and keeping in the short space of twenty years, has no precedent in modern landscape gardening.

R. BUIST

HORTICULTURAL SOCIETIES.

Messrs. Editors:—Under this title I have read many articles in the “Florist,” and other Horticultural papers; every one giving his own views and opinions, but none it appears to me seem to have taken the subject into earnest consideration.

Horticultural magazines publish articles about Horticultural Societies, horticulture, floriculture, strawberries, rural taste and its mission, landscape gardening, cultivation of Indian corn, &c., and of everything, even of Scoundrel the 1st, or Napoleon III, as you please, the kinsman of that great man, who, in 1812, in a fit of genius, forgot his army on the banks of the Muskawa, probably to make hygiene experiments on the salubrity and healthfulness of sleeping in the snow, on pillows of ice, eating horse-flesh, when it could be got—but oftener refreshing himself with that compound of azote and oxygen, which natural philosophers call air—air at a temperature of 28° below zero, Fah. (don’t you think, Messrs. Editors, this a very substantial food? one does not want ice cream after such a meal.)—or taking cool baths in the Beresina. See what it is to be a man of genius! He wanted only wings to be a real genius of the air; although he could fly without them; as this greatest man of the age perform the greatest *flight* on record.—

He flew (4000 ages contemplated him,) from the pyramid of Cheops across the Mediterranean to the Paddiest nation in the world.

I crave indulgence, Messrs. Editors, for making this digression on such small things as great men, but if Dr. Lindley indulges himself in talking politics in his Gardeners' Chronicle, we may perhaps also do so in this free country, when discussing horticulture, which makes laurels to grow to crown the head of human butchers, generally called Heroes.

I was saying that horticultural magazines write on gardening, botany, &c.; some few of the public read these writings with as much attention as we generally read the advertisements of sales of second hand clothing or furniture. Horticultural societies are daily established, one-tenth of the members attend the meetings and sham-exhibitions of these societies, where the prettiest and most interesting productions are certainly not those of the vegetable kingdom.

While I am in the vein, will you permit me to take for my subject your own Horticultural Society, as being the oldest and most important in the Union? You do not say yes. Well, let us see, let us be men, let us acknowledge our own infirmities. I said at the commencement of this, that horticulture and horticultural societies are not considered earnestly either by amateurs or by gardeners, with the exception of a few of each party; this indifference to those institutions so useful to both, arises from many very different causes. The indifference of amateurs comes principally from the disappointment they often experience in their gardeners; the indifference of some of the last comes simply from their own indifference—but some, and these are the minority in number, but the majority in talents, are indifferent, or rather, to be just, are dissatisfied, perhaps disgusted, to see that their employers are never satisfied at whatever they do—want to have their own way about everything, and yet make the gardeners responsible when things do not turn out well; or if satisfied, do not express their satisfaction for fear their gardeners should think too much of themselves, and might ask a little advance in wages, which in this case would be very natural, having the sentiment of their own worth; they are dissatisfied and become indifferent when they see that good plants, difficult to cultivate and well grown get no more encomiums or better awards

of premiums than mere trash ; and sometimes worse than that, no mention, no notice taken at all of their plants. In the year that is just past, we have seen something of that sort, but it is of no use to particularise. They become dissatisfied, *demoralized*, when they see that, besides getting no premiums or mean ones, they get no credit, no publicity being given to the awards of prizes, except in a few of the political papers; the two or three horticultural magazines they subscribe to, and which ought to publish all the proceedings of horticultural societies, never mention a word of such, or if they do, it is in such a partial way, that it is still worse. Editors and proprietors of these magazines seem not to comprehend that their interests are connected with the success and prosperity of horticultural societies, the prosperity of gardeners, nurserymen,—of all, in fine, who are engaged in horticultural pursuits, all are linked together. This is entirely lost sight of; you are the first, in your last two numbers, who seem to have understood the importance of giving a large publicity to every branch of horticulture. In my opinion, your “monthly tour of inspection,” which I would call “horticultural review,” will do more towards the diffusion of taste for horticulture than all the exhibitions alone. But if magazines (and we will have a respectable number of them,) and horticultural societies, would join together and lay aside their little jealousies and many other things not worth mentioning, in a few years we would begin to see some of those wonders of the old world that I am anxious to see in the new one ; that is to say the wonders of *gardeners’ skill*. I am also desirous of seeing one day, a large Central Horticultural Society, or Horticultural Congress, composed of all the local societies, that in twenty-four hours could meet in one given place, New York for instance ; but this is perhaps too much for the present, and before establishing a new society we must try to reform the defects of old ones. Let us begin. Will you allow me to speak of your society? You do not answer ; so I take your silence for consent ; but first, a few words in the shape of exordium. Besides my being fond of flowers, as my name implies, I am very fond of talking. I say so here to prevent some of my friends, the gardeners, telling me that I have too much tongue for a lover of flowers ; real love whatever be its object, speaks more with the eyes and heart than with the tongue. I believe that too—but the object of my love, of my talk,

I mean, could not understand the eloquence of my eyes or heart, so I must express myself more significantly.

Now my exordium is over, and I still scratch my ear to know how to come to the point. It is a delicate matter, interfering with other people's private affairs; but I think this is not a private affair, it is an affair of the Horticultural public, so I have the right to rummage it, and as I must begin with something, I will ask you, first: Who were the members of your committee of arrangement at your last September exhibition—they were not gardeners assuredly? but, if they were, I congratulate them upon the fine distribution of the articles exhibited. When I entered the Floral room, of course nobody was there but the managers, as I thought; there was no crowd to prevent my looking at the objects closely, nor to distract my attention. But this was all in vain. Everything was so much mixed, pell-mell, that I could not find the plants that were for competition, except a lot of antediluvian specimens—I suppose the “hop-poles” of the “working gardener”—which stood by the door of the Hall—which plants, I suppose, had been once bushy; they must have been contemporaries of Wm. Penn's elm.

How many times I sighed for the *Ericas* of Chiswick, three or four feet across, when looking at these venerable, but not very admirable productions of the 17th century, if not older; for I must tell you, that when I sailed from Dutchified Albany, I had the conviction, whatever the “working gardener” had said, that I should see some fine plants, if not of *Ericas*, at least some specimens similar; but, alas!—

Now I want all your indulgence, for I am going to abuse all liberty of being indiscreet. I am going to ask you, who are the members of your executive committee?—are there any scientific men amongst them?—are they young men or old ones?—it does not matter, if they have young ideas. You will not speak. I see—you are offended at my inquiries; if so, I am very sorry; but you will permit me to tell you, it is a poor way of reforming abuses, if you will not point them out. I am launched now and I will give you my opinion.

I think a society like yours, in a city like Philadelphia, ought to have, as much as possible, scientific men for officers, or, if not

scientific, very zealous for the advancement of science, (for you **must** not be too much dazzled with scientific men, they are often **great** humbugs,) especially the more active men, Secretaries, Chairmen of Committees, &c. Such a society ought not to be overruled by the Gerontocracy.* We are in an age of progress, and you **must** not retrograde or be stationary, but advance, march with the age; for are you not Americans in Pennsylvania? Will you allow the old country ideas of Europe to rule you? I do not believe it. You ought not to retrograde, but it is what I think you have been doing since a few years. I saw Philadelphia for the first time some 12 or 13 years ago, and I think there were more good plants to be seen then in public or private collections than at present. Your society may possibly have saved money since then, but it has not advanced the science of Gardening or Botany; it has neither diffused the taste for exotic plants or native plants. Philarvensis and others will have a good deal to say before they convince people that the *Hemlock*, *Spruce* and *White Pine* are as handsome trees as any coniferæ from Australia or other places. It will be a long time before people will believe that *Andromeda Mexicana* and *A. arborea*, *Asclepias tuberosa*, *Cypripedium spectabile*, *Cornus florida*, *Acer montana* and *A. stricta*, *Epigæa repens*, *Lycopodium dendroideum*, *Osmunda spectabilis*, *Adiantum pedatum*, &c., are as handsome as any exotics of the same genera. Show a tree for elegance that will surpass a handsome hemlock, a nobler deciduous tree than *Liriodendron tulipifera*, a handsomer perennial than *Asclepias tuberosa* or *Aquilegia canadensis*, or shrub than *Azalea calendulacea*, a prettier fern than *Botrychium fumariodes*, or *Adiantum pedatum*, and, to close the list of these native gems, (for Philarvensis and others *sui generis*, but "wild things" for most other people,) a prettier miniature of a plant than *Physera chrysophthalma*; but I forget that I am going too far, I am travelling out of my subject, so I will come at once to the peroration of my epistle, which my readers have been longing for.

I hope before long to hear of some notable changes in your society, and to see in the Florist, that —, gardener to —, exhibited *Phenocoma prolifera*, *Aphilexis humilis*, *Pultenæa ericoides*, *Embothrium* or *Telopea speciosissima*, &c., three or four feet high, and about

* I think you call this in English "Old Fogyism."

as many across, and Mrs. —, or Miss — exhibited a beautiful collection of natives, among which we noticed *Polygala paucifolia*, *Crotalaria saggitatis*, &c.

ANTHOPHILUS.

[Our correspondent is very severe upon the Society: we know it is not entirely perfect, but take it for all in all, we get along pretty well. The committee into whose hands the arrangement of the annual exhibition was committed, labored under several difficulties—the most prominent of which was the promiscuous arrangement of the contributions of plants—these have been mixed together without regard to any system, with the single exception of size. The plants for competition were not sufficiently set out, and unless to those familiar with the arrangements, no plants could be found. On one side of the room were placed the best *Achimenes*, and second best were on the other side of the room, mixed up with a general collection of plants. Nothing was distinctly visible except the large designs and the specimens of *Manettia glabra*. Until this confused *want of arrangement* is abandoned, the objections will remain.—Nevertheless, we doubt if our friend has ever seen in this country more good plants at any one time than were gathered at our last fall exhibition, and we think we can promise him that, if he comes again, next September, he will see something that will very nearly satisfy him.—*Ed.*]

THE PANSY.

There is not, perhaps, a greater favorite in the whole category of Flora's extensive field than the Pansy. Whether it be known by the local appellations of Johnny-Jump-Ups, Heartsease, or Cull-me-Sweet, it is still the same universally admired pet, particularly with the fair sex. It matters not if the peculiar construction which may be put upon the sweet words made use of in designating it has any influence over the mind, there are charms enough belonging to its external appearance that are sufficient to wed the admiration of all flower lovers. An emblem of modest beauty and graceful loveliness: we are reminded of the fairest daughters of Eve, and well do the ladies acknowledge the compliment which nature has paid to

them, for it would be a difficult matter to find one who would not contract the ruby lip at the sight of a fragrant "Pensec."

Notwithstanding the many attractions which it inherits, we seldom see its beautiful proportions and bright and varied colors in perfection, or even the cultivation rightly understood; still this is simple and inexpensive, and can be accomplished with little trouble.

The Pansy, although so generally admired, is only a naturalized republican. The species of *Viola*, tricolor and lutea, have each contributed to make up the amalgamation of the different classes of colors which it exhibits. *Viola tricolor*, in its native state, is found in cultivated fields and hedge rows, and *V. lutea* generally on the sides of elevated hills. Often have I been enchained to the spot by the sight of this lovely gift of Flora, while botanizing in alpine districts, and oftener has its aurean splendor and modest effulgence captivated the senses of many a botanist, and made him forget the world and its dizzy throng. The singular natural beauty of the Pansy, has long since brought it under the changing operations of the hybridizing florist, and the all important (with him) standards of form, color, and size, have been established in outline and texture, till perfection has mounted the last pinnacle; but this standard of excellence is not seen in the long horse-jaw formed flowers and muddy colors that we generally meet with. It consists of a well formed, smooth and circular outline; the petals thick, firm, flat, and each overlapping the other, so as not to show the divisions.—Whatever the colors they should be clear, bright, and well defined. If belted, the margin ought to be even and not run into the ground color of the centre, which centre should be of a uniform shade.—The size of the flower is but of secondary consideration, but, to be up to the standard, ought not to be less than two inches in diameter, (I have occasionally had them three inches) and supported upon a footstalk, elevated above the foliage. The eyes should be either a well defined blotch upon the base of each of the three lower petals, or finely feathered. The blotch is generally acknowledged as best, but when prettily pencilled it does not disqualify as an exhibition flower.

It appears somewhat strange that there are so many ladies who seem so enthusiastically fond of flowers, and yet so few attempts are made by them to cultivate and improve these mirrors of themselves.

Surely there must be a screw loose somewhere. Is it that they consider the matter as beneath the dignity of "Woman's Rights," or does it proceed from ignorance how to proceed? Let us hope, though possessing knowledge generally, that the latter is the cause in this case; and shame be to him or her who do know and will not assist in this much to be desired education. Would that we could induce our "Fairies" to shun the parched atmosphere of dry stoves, and their accompaniments, consumption and imbecility, by becoming florists and observers of nature's vegetable laws; when, instead of the sickly hue of the falling leaf, we should see their lovely cheeks blush as a "summer's rose," and their movements show truly "the elastic tread of woman." The cultivation and improvement of the Pansy offers a wide scope, and is particularly adapted to the fair sex, and if the following directions are followed, gratification will be the result.

In order to improve the flowers of the next generation, the surest way is to hybridize between two of the best qualities, and both flowers should be of the same class or markings; for instance, one may be large but not well formed or dull in color, and the other possess good form with bright and distinct markings, but small in size; take the pollen off the anthers, (the little ring surrounding the point in the centre of the flower,) of the small one with a camel's hair pencil, and dust it over the stigma, or little point of the other flower, which will cause the pollen to adhere and secure the cross; afterwards mark the flowers operated on by tying a piece of thread round the stalk, and remove at the same time all others but those impregnated on the same plant; cover over for two or three days with a small net, sufficiently open to admit sun and air, but close enough to keep out bees or flies. The same results may be more imperfectly gained by simply choosing seed from the best flowers, but the extra trouble becomes a pleasing operation and will amply repay by the greater certainty ensured.

As a winter and early spring display is desirable, the seed should be sown about the beginning of August, in a moderately rich ground, and shaded situation, protected from violent storms of rain, and towards the middle of September the young plants should be removed into a frame, freely exposed to the sun, and placed about four inches

apart in a good loam, encircled with rotted stable manure. Leave off the sashes till towards the middle of November, and when frosty nights occur put them on, giving plenty of air through the day.—As severe weather comes on, line round the outside with eight or ten inches of mould, littery dung, or a thatching of clean straw.—In fine days continue to give plenty of air; but avoid cutting winds, and cover at nights with straw mats, or other material, to keep out the frost. When the soil becomes dry, give a good soaking of water, choosing a fair morning for the operation, but through the winter it is better to be too dry than over moist, and if any warm showers should occur take advantage of them by drawing down the sashes. If the above is attended to, there will be a good blow of flowers through the winter, and in March and April the plants will be covered. It is advised to plant four inches apart, which will be enough till the first flowers show, when all of bad quality may be removed, and leave the better ones sufficiently apart for future growth.

The above is intended for winter and early spring blooming, and entails a little extra exertion; but the Pansy is very hardy, and will stand the winters with no more protection than a covering of cedar or other like branches, to keep off alternate thaw and freezing, caused by the bright sun immediately following frost. In this case the bed should be well enriched with a dressing of good rotted manure, and planted as recommended above, and if a shaded spot is chosen the plants will continue to bloom most of the summer, and on to the winter following.

When a good variety is obtained, it is desirable to retain it, which may be done by planting out in a well enriched, damp and shady place before the heat of summer comes on, and the tops or flowering shoots cut off at the same time; here let it remain till fall, when it can be taken up, and will admit of being divided into single shoots, each having roots at the base, which in their turn make equally large plants; slips also, or side shoots taken off early in the spring or in the fall, and planted in a shaded place, will strike root. In the heat of summer cuttings generally damp off, whatever care is taken of them.

By the above practice I have succeeded well with this little gem, and have several seedlings equal in quality to the European show

flowers, and feel convinced that with care and perseverance we can in a few years rival their standard; only plant a portion of stock in a damp and somewhat shady yet open situation, and the Pansy is as much at home and as easily grown as it is in Britain.

WM. CHORLTON, *New Brighton, S. I.*

In making a bow to the public at our entrance upon the new volume, it is with confidence of being about to use our utmost exertions to deserve the approval of all under whose notice we may come. Our advantages are great. We are here in the midst of horticulturists of every shade, having as references the fine collections of our amateurs and nurserymen; the proceedings and library (the best in the country) of the Pennsylvania Horticultural Society, and the assistance of many friends, both scientific and practical. We bring to our work enthusiastic admiration for everything pertaining to horticulture, an excellent knowledge of the best plants in cultivation, a fair amount of botanical and other knowledge requisite for carrying on a horticultural journal, and a determination to make our magazine one of the first, if not the very first, in the country.

The too much neglected science of botany, especially that relating to our own Flora, we will do our utmost to diffuse a love for;—we intend, as far as we can, to note the flowering of the plants indigenous to this neighborhood as they appear. In this we are promised the assistance of a scientific gentleman—one of the best *plantagnostes* of this city.

Our first plate is entirely a Philadelphia production—obtained from seed here, named in honor of the wife of our greatest amateur horticulturist, painted by Mrs. Smith, and lithographed and colored by Duval—we challenge the United States to produce its superior! We would have commenced the volume with one of the plates ordered from Europe, but they did not arrive in time. We shall present to our readers, as far as we are able, an interesting variety of subjects; and we hope to figure among other plants all the best American varieties of the different florist's flowers.

The new introductions to this and other cities will be noted and described; and as we think that more plants are imported here than

to any other place, we shall have the greater opportunities. During the past year many rare and fine plants were introduced. The *Amherstia nobilis*, brought out by F. Lennig, Esq., is the only one in the country, and probably will be alone for several years. The introductions of our other amateurs and nurserymen have been choice and extensive. We hope during the present year to record still more extensive importations; four or five new places have been commenced in this neighborhood, all of which will add their quota to the general display. The future of American horticulture, brilliant as it is, is nowhere more so than here.

The pomological department of our journal will be attended to by several able contributors, so that it will receive its fair share of our time and space. As the number printed is limited, persons wishing the complete volume will do well to subscribe early. Our terms are low, much more so in proportion than those of any other publication of the kind. All subscriptions must be in advance.

CALENDAR OF OPERATIONS FOR JANUARY.

FRUIT.

The commencement of a new volume seems a suitable occasion for making a few observations explanatory of our intention with regard to the nature and intended application of these monthly remarks under the above head. In the first place they will be, as far as possible, *practical*. We have no desire to take up space with mere theoretical speculations of doubtful practical application. At the same time we will endeavor to direct attention to the fundamental principles upon which the various practical operations are founded, for it is only through a recognisance of these laws that we are enabled to trace either failure or success to their proper cause, see the rationale of our operations, and proceed with certainty in their execution. The fruit grower has many incidents to contend against, such as unsuitable soil, ungenial climate; insects and vermin of various kinds are constantly counteracting his best of efforts—the latter formidable enemies requiring close observation in studying their nature and habits in order to adopt means for their extermination. A large field for observation and experiment is before him. Much information has yet to be learned with regard to the

individual peculiarities of various kinds of fruit trees—the soil and situation most suitable for them—their exemption from diseases—their constitutional hardiness in withstanding extreme and sudden changes of temperature,—how they are influenced by early and late, winter and summer pruning; all this, and much more requiring observation, and well authenticated experiment, before an ultimate decision can be arrived at, avoiding as far as possible the frequent occurrence of mistaking a consequence for a cause. We hope to see much valuable information of this kind in the “Florist,” from experienced cultivators. These we do not pretend to instruct. Our aim will be to assist beginners, and that numerous class of amateurs who laudably prefer to spend their leisure in attending to the various practical operations of horticulture; and as the interest taken in these matters will generally be in proportion to the amount of success, we hope to be able to suggest an occasional idea which will assist in the enjoyment of one of the most agreeable and pleasant pursuits. For

“These are arts pursued without a crime,
That leave no stain upon the wing of time.”

SITE FOR FRUIT TREES.—The situation in which a tree is placed influences in a great degree its welfare and productiveness. What are called early situations are not commendable, since it is not desirable to have them early into flower, thereby increasing the liability of losing the crop by late frosts. A somewhat exposed situation on a northern slope is preferable to a southern or sheltered spot.—Early growth should be avoided if possible, as an early development of blossom is almost sure of being caught by spring frosts while the tree is unprotected with foliage. Apricot trees, more especially, should be planted where the sun will not reach them before mid-day. They are easily excited in spring, hence we often find them producing regular, good crops in city yards where they are shaded by buildings, while in more exposed and warm places they as often fail.

PLUMS.—Much discouragement has been experienced in the culture of this fruit, on account of its destruction by the Curculio, or Plum Weevil, and many remedies have been suggested and tried, the most of them being only partially successful. Our reason for alluding to this at the present time is to make the remark that we

know a raiser of this fruit who annually secures good crops, and is seldom troubled with a visit from this insect enemy. The only precautionary measure he adopts is a frequent stirring of the surface soil round his trees during winter, forking it over occasionally that the frost may kill the larvae, slightly sprinkling the ground with salt after each operation. The remedy is easily applied and worthy of trial.

GRAPES, OUT OF DOORS.—Towards the end of this month and beginning of next, is the favorite time, with many, for pruning their grape vines, although November is decidedly preferable for reasons stated in a former number. Every one has his own way of doing this: some prefer the close spurring system, others the renewal mode, more a combination of both, and a large majority cut away in the no-system style. The long cane or renewal system we consider best for native grapes, if not for foreign sorts also. The spurring method is the most simple, but not the most scientific. To carry it out fully and profitably, the plants must be maintained in a high state of cultivation, and even then will be short lived. A somewhat rigorous summer stopping is constantly necessary, which tends to impair and weaken the vital energies of the plant. Young canes should be trained in annually to take the place of older ones which are to be cut out. These young rods produce better fruit and keep the plant in an active, healthy, root-making condition, and by judicious management during growth, the crop can receive all the benefit desirable from close stopping, without checking the extension and increase of roots. The young, vigorous unpruned shoots will maintain a proper balance between root and foliage.

S. B.

In order to arrange the business of the "Florist" properly, the last Nos. appeared in rapid succession. The readers will therefore remember, that the last calendar was intended for the present month. But as it is probable that the new arrangements of the Florist may prevent its usual punctual appearance on the first of the month, and that to the many new subscribers to the new series, the last calendar will not be available, I make a few further remarks for January, intending them to be applicable to a portion of the month of February also.

FLOWER GARDEN.—At every opportunity work connected with this department should be forwarded. If the lawn be thin from constant mowings, a thin dressing of rich compost may be sown over it. *Soot*, whenever it can be obtained, is excellent for this purpose. *Guano*, mixed in proportion about one-sixth with sandy loam, is also very effectual. Whatever alterations and improvements are to be made, should be at once decided on, and arrangements made for starting everything at the very first opportunity. Our seasons follow each other in such rapid succession that without much care and forethought, we are apt to find them gone without the accomplishment of our intentions. Get manure in readiness wherever the beds or shrubberies are poor. I dislike the old practice of putting it on while frosty. There is little time saved by it. It prevents the ground thawing or drying fit for operations, as soon as it otherwise would. It is well to be in advance, but it is better, sometimes, as the Frenchman said, "to wait awhile that we may get done the sooner." It is a good plan to make a rough sketch of the beds in a Flower garden, and where flowers are grown in masses, mark on paper what flower is to fill any given bed. The harmony of color can then be better seen at a glance, and anything incongruous can be remedied in time. If there is not enough of anything on hand, there will be time, in most cases, to propagate a few more. This will tend much to expedite work at the proper season.

In the last number I gave a list of hardy plants. I need only observe here that most of them can be had in the trade in Philadelphia, as the remark has been made to me that our nurserymen do not keep these things. All pruning should be done as speedily as possible; the earlier it is done the stronger the plants will shoot, and the contrary when it is deferred till the bursting of the buds.

GREEN HOUSE.—Towards the end of the month, before the plants, generally, are about to make a good growth, they should be looked over, and those badly drained, and those which require repotting, attended to. One of the main things to be attended to in all kinds of plants is good drainage. Whatever proportions of soil be used for each respective kind of plant, they should each be thoroughly decomposed and mixed together. In potting, the plant should never

be placed deeper in the soil than it was before, and if the roots be very fibrous, the soil must be pressed pretty firm.

AMARYLLIS, and indeed bulbs of this class generally, are not so much grown in our country as they deserve to be. Where they are, and have been kept dry through the winter, many of them will show signs of growing soon. When that is the case, they should be repotted. Sandy fresh loam is the best for them; if manure be used, it should be thoroughly decayed, and where cow-dung can be obtained, it should have the preference. Many repot their

JAPAN LILLIES now, but it is a great error. They are very nearly hardy, and hate artificial treatment above all things. They should be kept all the winter dry in a cool place, and when they show signs of growing through the old soil, shaken out and potted in rather firm sandy loam; all the light and air possible should be given to them, except exposure to the full rays of the sun. When allowed to come along thus naturally, without any early potting, or forcing, they succeed admirably.

HOT HOUSE.—As the days increase in length the temperature may be allowed to rise a little, and the plants receive more water and encouragement to grow. Many things will require repotting, as in this department some one or other will require that operation all the year round; frequent repottings are very beneficial to stove plants—the fresh air and gases which are submitted to the roots, doing no doubt as much good as the new soil itself. As fast as any specimens get too large, they should be gradually dried off, cut down and repotted as described in former calendars. Where this operation has been gone through once, it would be better in some cases to raise young plants and throw the old ones away. *Torenia asiatica* generally does best raised every year from cuttings; if a stock has not been got ready it is time to begin, they strike root in a few weeks; *Orchideæ* will require rather more frequent syringings, otherwise there need be little change as yet.

VEGETABLE GARDEN —*Cucumbers* in England are the “first and last” of a gardener’s thoughts; here they are growing into disrepute — nevertheless there are many who will be thinking of starting them soon. Where there is fresh stable dung at command, it may be got ready by the end of the month, by frequent turning and mixing,

whereby the rank heat will be moderated and the most violent fermentation avoided. When the heat in the frame has subsided to about 75° , if plants cannot be procured the seed may be sown; never allow the heat to rise above 90° without giving air, and for the first few weeks guard against injury from steam by leaving a slight amount of air continually on. There is little art in raising early cucumbers, the main thing is to keep the temperature from 75° to 85° , with all the air possible, without allowing the temperature to fall below that; the least check will throw the crop back a week or more.

Mushrooms are yearly coming into greater request; the excellent directions given in the last number by Mr. Hammil, are well worthy the perusal of all interested in the subject, and will render further directions unnecessary here. The principal attention will be required for *Spring Salads*, nothing being more desirable in early spring; a little heat will do wonders in forwarding them; the greatest damper arises from the possibility of their getting too much — from 45 to 55° will bring forward *Radishes*, and *Lettuce*, *Horn Carrots*, &c., in first rate style.

ICE HOUSES.—I have already in a former calendar, given the principles on which the proper keeping of ice depends; a correspondent differs in some respects from me, and as the season has afforded few an opportunity as yet of filling their houses, it will not be out of place to give his ideas, merely premising that I keep my ice *well* on the principles I had laid down. He says, "I differ from you on the importance of packing ice in large pieces. When the ice is broken small, the water from the melting ice runs between the spaces, and freezing there, forms the whole mass into one solid lump; but when it is packed in large pieces, the spaces never close up, and the air permeates continually between them." Much may be said on both sides of this question; having given my friends reason for differing, I leave it there.

T. J.

Pennsylvania Horticultural Society.

The stated meeting was held on Tuesday evening, 18th instant. Although at this season we do not generally see plants exhibited,

yet Mr. Thomas Meehan exhibited a good collection in flower, consisting of *Begonia incarnata*, two sps. *Tillandsia*, *Ixora incarnata*, *Daphne indica*, *Cyclamen persicum*, *Goldfussia asophylla*, *Plumbago rosea*, *Siphocampylos bicolor*, *Pentas carnea*, *Primula sinensis fimbriata*, a *Cineraria*, &c. Also, two plants shown for the first time, *Beloperone Amherstii*, and *Raphiolepis indica*, in fine bloom. Mr. Buist showed an *Astrapea Wallichii* about one foot high, in bloom. Thomas Meehan and T. Megrahn showed each a design and basket, and B. Gulliss a hand bouquet. Apples were exhibited by Samuel Ott and T. Megrahn, and Pears by J. B. Baxter and J. B. Guion.—The premiums were as follows:

Plants in Pots—For the best collection, to Thomas Meehan; special to the same, for *Raphiolepis indica*.

For the best design to T. Megrahn; 2d to T. Meehan; best basket to T. Meehan; 2d to T. Megrahn; best hand bouquet to B. Gulliss.

Apples—For the best to Saml. Ott; 2d to T. Megrahn.

Pears—Best to Isaac B. Baxter; 2d to J. B. Guion.

Vegetables—Best to T. Megrahn.

Preserved Fruits and Vegetables were exhibited by Dr. Frombargar, which were very fine; we tasted Peaches nine years old, Cherries nine years old, and Tomatoes two and three years old, which retained their appearance and flavor excellently. Seeds of a new Pea were presented from Mr. A. H. Hurst, of Conn., and a box of California seeds from Mr. C. A. Shelton, of Sacramento.

After the adjournment of the stated meeting the annual meeting took place, and the usual election was held for officers, which resulted in the re-election of all the present officers; there were two candidates for Recording Secretary voted for.

NEW PLANTS,

Flowered at Springbrook for the first time.—No 2.

JATROPHA PANDURAEFOLIA—An euphorbiaceous plant, with flowers in clusters, each about the size and shape of *Euphorbia jacquiniæflora*. The leaves, as expressed by its specific name, are "fiddle shaped," and in themselves beautiful. It was imported last summer

from Messrs. Lee of the Hammersmith nurseries, by Mr. Cope. Its only fault seemed to be a tendency to grow "long legged." It will take some art to get a good specimen of it; the flowers are of a deep crimson color, and they come out continually as the plant grows; I consider it well worth growing; it does well with me rather "under-potted," in a soil composed of turfy peat with a little loam, and in a stove at a temperature of 75°, exposed to the full sun.

BOUVARDIA LEIANTHA—A great addition to this pretty family of plants. The individual flowers are similar to the old *B. triphylla*, but the habit and inflorescence are very peculiar; the leaves are large, roundish, and very rough, and the flowers come out in large panicles at the end of the young shoots. After the first set of flowers are faded fresh ones come out from the next buds beneath; my plant has been thus in a successive state of flowering for two months, without the appearance of ceasing yet. It was obtained from the original imported by Messrs. Hogg, of New York, last spring; it did not stop growing till some of the shoots were three feet long; but I believe another specimen has flowered in one of our Philadelphia collections in a much dwarfer state. It thrives well with me in a soil composed of burnt loam and sharp sand, in a shady part of a light greenhouse; it has been flowering in a dry stove with the *Jatropha*.

SIPHOCAMPYLUS MICROSTOMA—A Lobeliaceous plant of much beauty. The flowers are twice the size of the old *S. bicolor*, and of a rich purplish crimson; they do not come out in the axils of each leaf singly, as in the old species, but are collected into heads. The plant is not such a strong grower; ours was imported last season by Mr. Cope, from Messrs. Loddiges, of London, and does well in a compost of burnt loam, sharp sand, and a little peat. It is growing and blooming freely in a light stove at a temperature of 70°

ANGRÆCUM BILOBUM—An orchideous plant, imported by Mr. Cope last season, from Messrs. Loddiges. It flowered lately in our orchideous house. It is by no means a showy kind, each flower being about half an inch across, of a pure waxy white, and having a tail about two inches in length; the flowers are in short spikes but a few inches in length. The lover of beauty will be pleased with it, notwithstanding the small growth of the plant and its want of showiness.

It does well with us in a pot, growing amongst moss and old fibrous roots.

FRANCISCEA EXIMIA.—This plant was imported last year by Mr. Cope, from Messrs. Low, of the Clapton Nurseries, London.—Though I have succeeded in flowering it, I have not been able to grow it to my satisfaction.

One of our subscribers in New York State, who seems to be very fond of heaths and New Holland plants, but who seems to be sceptical as to the capability of gardeners to grow them here, writes us:

"I offer to any one who will exhibit six good plants of *Ericas*, not four feet by five, but only 18 inches or 2 feet high, and bushy in proportion, in short plants that will bid fair to become "Chiswick specimens," *Ten Dollars*, and for *Boronia serrulata* and *Hovea Celsii*, 3 feet high and as much through, as some say they have seen them in England, Fifteen dollars. \$25 for the eight plants shall be paid to any exhibitor at any exhibition in Philadelphia, New York City or State, Baltimore, Albany, Rochester, Boston, &c. The *Ericas* must be such sorts as *E. Neillii*, *Cavendishii*, *retorta major*, *Irbyana*, *Cerinthioides odorata*, *Ventricosa superba*, *Banksiana alba*, *Andromedæ-flora*, *oblata*, &c.

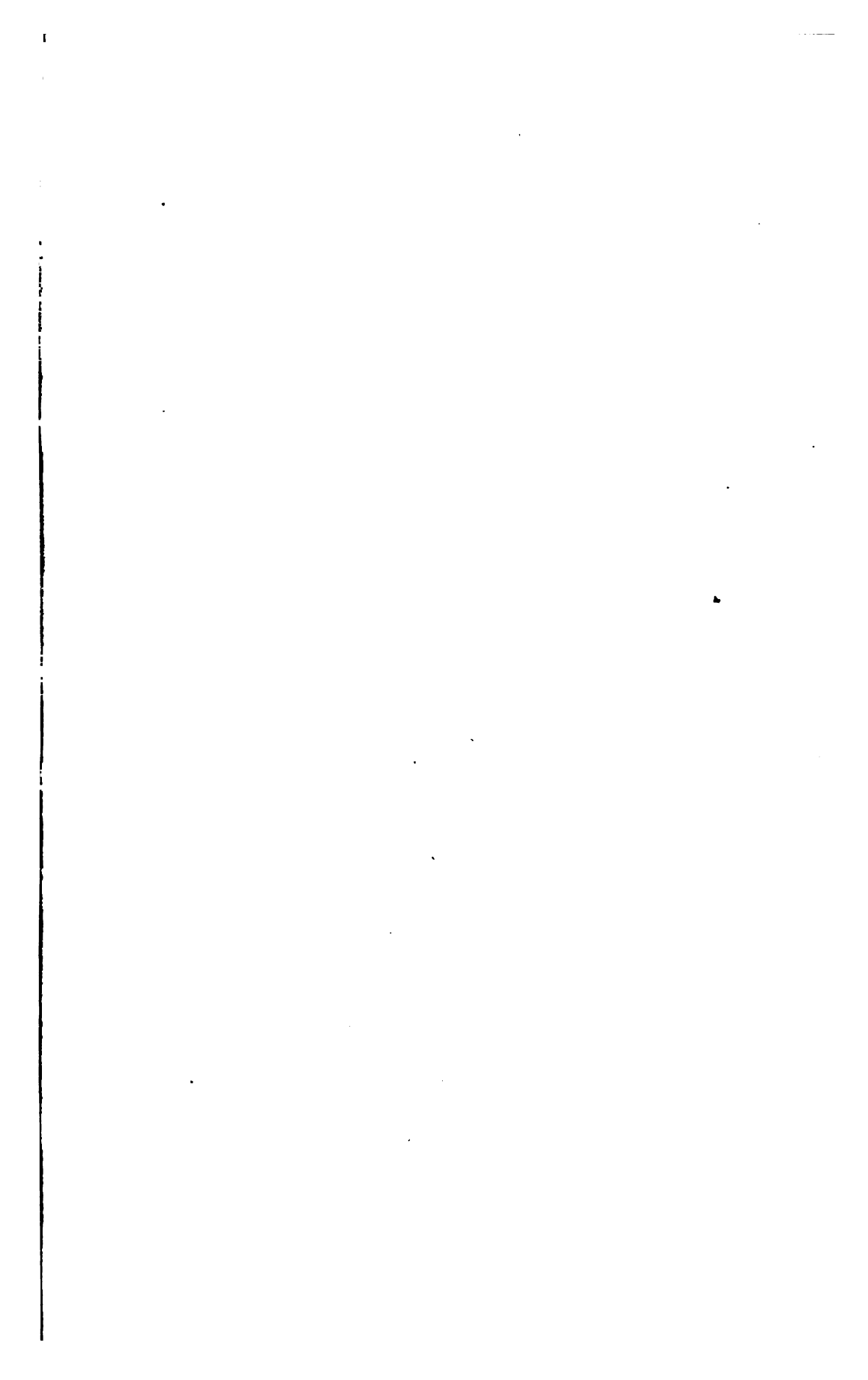
TO CORRESPONDENTS.

Communications received from P. S. Carolan, Sav.; Luke Seely, Rushville; Ed. Ohio Farmer; J. McDonald, Pensacola, Fla.; M. Doogue, Watertown, Mass.; Geo. L. Brown, Mobile, Ala.; Samuel Jordon, East Stoughton, Mass.; Jas. Stevenson, Waterbury, Conn.; P. Develin, Mobile, Ala.; Jno. B. Garrett, Montgomery, Ala.

We should like to hear from all our correspondents who have names to send, as early as convenient.

We have been unavoidably detained, owing to delay in getting out our plate, but we have vanity enough to think that we will be found worth waiting for.

ERRATUM.—Page 18, for *Physera chrysophthalma* read *Physurus chrysophthalmus*.





"ACHIMENES LONGIFLORA ALBA"

On Stone at the School of Design



THE FLORIST AND HORTICULTURAL JOURNAL.

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[No. 2.]

ACHIMENES LONGIFLORA VAR. ALBA.

Gesneriaceæ—Gesneriæ—Didynamia—Angiospermia.

GEN. CHAR.—*Calycis* *tubus* ovario adnatus, limbus 5-partitus, lobis lanceolatis. *Corolla* tubuloso-infundibuliformis basi hinc sæpe gibba, limbo plano 5-fido, lobis subæqualibus subrotundis. *Stamina* 4, didynama, antheris non cohærentibus. *Rudimentum* *stam.* quinti corollæ basi inferne impositum. *Nectarium* glandulosum annulare tenue. *Stylus* in stigma vix incrassatum obliquum aut subbilobum abeuns. *Capsula* semibilocularis bivalvis, placentis parietalibus subsessilibus.—*Herbæ* *Americana erecta villosa*. *Folia opposita aut ternato-verticillata petiolata dentata*. *Pedicelli uniflori axillares*. *Corollæ coccineæ aut purpureæ*. DC.

CHAR. SPEC.—*A. foliis* 3-4 natim verticillatis, ovatis, oblongiæve, grosse serratis, cauleque villosis; *pedicellis* unifloris calyce brevioribus; *calycis* laciniis lanceolatis erectis, corollæ tubo 4-plo. brevioribus; corollæ limbo amplo patente.—Benth.

A. longiflora. DC.

Var. alba. Corollis albis, fauce annulo carmineo, e quo vittæ 5 in limbum radiant pictæ.

A. longiflora alba. Haag.

A. Jaureguia. Warsc.

The beautiful flower which we figure this month, is a natural variety of the species *longiflora*, a single specimen of which, among thousands of lilac and purple ones, was discovered in 1847, by the celebrated collector, Warscewicz, near an extinct volcano in the neighborhood of Guatemala.

He transported this specimen to the gardens of Mr. Klee, Prussian consul there, and sent a drawing to Mr. Fk. Haage, of Belgium, made by a lady named Jaureguia, whose name he wished it to bear, and in 1849 he sent all the stock to the same person.

Painting can hardly reproduce the beautiful effect of these flowers; although not in itself a brilliant color, the pure white, relieved by a star of carmine, makes this *Achimenes* one of the most distinct varieties.

This plant is now generally to be found in large collections in this country; and we have no doubt, that with its congeners, *longiflora* major, *longiflora latifolia*, *gloxiniiflora*, will soon be in the possession of every one who has a stove or a warm greenhouse.—The specimens shown here last fall will have, we hope, the effect of

exciting competition in others; and we think this variety indispensable to a good exhibition of this attractive genus. H. C. H.

CULTIVATION.

To a lover of Horticulture, it is highly interesting to watch its progress. The number of new flowers yearly added to our collections is surprising. It would surprise old Gerarde or Parkinson, of the old world, or the more recent Bartram or Marshall of our own. The stock of novelties seems inexhaustible, as it indeed will prove to be. The introduction of new plants is a source of the highest pleasure. It is second to no other Horticultural pursuit in interest, except perhaps hybridization. The latter originates entirely new forms. The laws of reproduction are so arranged by the skilful operator as in reality to form a new kind. The act becomes, in fact, a species of creative agency, through the instrumentality of man, highly flattering to his mental powers. It elevates him to a high position amongst organic nature, alike gratifying to his intellect and his pride. He in some degree decides on what forms of being shall or shall not exist. The introducer of new plants does not become the agent in the creation of new forms, but by causing them to exist where they never did before, they produce pleasurable feelings, little inferior to those originating from successful hybridization. Besides, the most beautiful flower will weary by an unending sameness, and the love of variety natural to the human mind, and the almost universal desire to possess that which is precious from its rarity, is together the main-spring of that pleasure the sight of a new flower gives to the florist, or the delight he experiences in being the introducer or possessor of it.

The Achimenes has been one of those families of plants that have progressed in numbers, variety and beauty very recently and rapidly, and has afforded a greater fund of enjoyment both to the introducer and hybridizer than most others. Fifteen years ago its very name was unknown; although one species had been in cultivation long before. That *Adam* of the tribe too, was no disgrace to its posterity. The rich, luxurious Pansy, of the present day, may blush when its descent is traced from the thin lanky-jawed *Viola tricolor* of the English corn-field; and the genteelly scented and royally marked Carnation look with scorn and contempt on its

old progenitor, as it is found in the old walls of Rochester Castle, in the English county of Kent. The beautiful *Cyrilla pulchella*, now *Achimenes coccinea*, was worthy to be at the head of such a noble race. In richness and elegance it has not indeed been surpassed by any that have followed it. The name, *Cyrilla*, was changed on account of its being discovered that it had been previously appropriated by Linnæus to a Carolinian plant, the beautiful small evergreen tree, hardy in Philadelphia, *Cyrilla Caroliniana*.—The first introduction was probably *A. pedunculata*, about 1839 or '40. It did not become much known however till the next year; the *A. longiflora*, and the *A. grandiflora* appeared in that following, when everything in the shape of an *Achimenes* was eagerly sought after. The number of kinds in cultivation now probably exceeds one hundred, and one would almost imagine that their native forests, in Brazil, Mexico and New Grenada, had been by this time completely ransacked; but "the cry is still they come," and assisted by hybridization, there is no prospect of a dearth of novelty in the tribe for many years hence.

A good soil for the *Achimenes*, is a compost of turfy loam, leaf-mould, and sand in about equal parts. A close, compact soil, will not grow them well. Where turfy peat can be obtained it is preferable to loam; broken charcoal, in lumps about the size of marbles, has a very beneficial effect when mixed with the soil, both in keeping the soil loose and open, and in affording a constant supply of moisture, without a superabundance. Drainage is very important, as, though it is almost impossible to give them too much moisture, dampness, or stagnant water is very injurious or even fatal to them. Having got the soil in readiness, the "bulbs" may be started at any time when a moist heat of 70° can be commanded; most gardeners start them about March or April. It is often an object of competition to have the finest plant from a single bulb. In that case one of the finest selected can be placed in the centre of a three inch pot, but for effect the best plan is to put in three bulbs of about equal size in a four inch pot, at equal distances from the centre. They should be placed about half an inch beneath the soil, and kept just moist, until the shoots appear above, when water may be gradually increased. They are real lovers of the syringe, which may be given

every evening till they begin to flower, when it may be discontinued, and the plants kept every way rather dryer. While growing they love a light, airy, yet warm situation, but are better shaded from the full rays of the sun. As they go out of bloom, water should be withheld in proportion; when entirely so, altogether. Then place the pots in a dry place, rather warm if convenient, and keep them dry until the starting period arrives. They propagate readily by the bulbs—one plant producing, after a season's growth, a dozen or more. Where it is desired to propagate any given kind extensively, and the flowering is consequently not so much an object; the plant can be kept in a close, moist, and shady house. This will cause most of the species to throw out small bulbs in the axils of the leaves in great quantity instead of flowers. Some kinds, as *A. pedunculata*, will not bloom at all this way, producing only the small bulbs. The bulbs of this variety, by the way, have a mucilaginous substance adhering to them, which, when a quantity is held together in the hand, causes them to roll over, as if they were of the nature of a sensitive plant. Many writers, (doubtless following one another,) have indeed described them as having the "sensitive" property. Hybridization is easily accomplished in this genus. *Longiflora* is a good maternal parent. Indeed, any that seed freely are to be chosen. The spotted or party-colored kinds are best to obtain the pollen from. Two self-colored kinds rarely make a good cross, as the progeny are a shade between the two colors, and, as I have repeatedly found, less beautiful. The seed, when ripe, should be saved till spring, when it may be sown in very fine sandy peat, in well drained pots or pans, and placed in a moist heat of 70° or 80°. They must be covered very slightly with soil, and not at all if they can be placed in a situation where they can be shaded from the sun's rays, so as not to dry up while they can be kept moist without saturation.

Mr. Robertson, gardener to H. Ingersoll, Esq., exhibited the finest *Achimenes* last fall ever seen at our society, but, according to Mr. Buist's late account of the Chiswick exhibition, we have these to beat yet.

A PHILADELPHIA GARDENER.

Received a supplement to R. Buist's Catalogue of stove, greenhouse and hardy plants.

HEATH CULTURE.

I am glad to see the attention of your correspondents directed to the culture of this beautiful exotic. Of a certainty there is no class of flowering plants more worthy of cultivation, combining, as they do, flowers of dazzling brilliancy and unsurpassed diversity of foliage to a degree unknown in any other tribe of plants. It is therefore a matter of astonishment that they are not the most prominent feature in all greenhouses. To say that they cannot be grown here is an apology which, I am certain, experience will prove untenable. The true reason undoubtedly is, that they have never been fairly tried. We are too much inclined to run into extremes. The Camellia is a good illustration of this fact. Truly it is a noble plant, either with or without flowers; still I think it is often cultivated to the exclusion of other plants equally beautiful and decidedly more interesting. It is a valuable winter flower, but in a collection of heaths we have flowers every month in the year. In a nosegay or small bouquet, a few sprigs of heather, (there is a volume of pastoral poetry in the name,) imparts a charm to which the Camellia can lay no claim. And I have observed that when procurable they are preferred for this purpose before any other flower.

We are told that the difficulty lies in unsuitable climate and want of proper soil; or rather, there are a series of undefinable obstacles in the way, summed up in the sentence, "They can't be grown here." I have no doubt that when the Peach was first introduced, some one, "more learned than the rest," predicted its failure; but peaches are plentiful and so will heaths be. "But we have no good peat to grow them in." True. Nevertheless, there is plenty of soil in America in which the heath will luxuriate better than it ever will do in peat. It is part of the Horticultural faith in England that Azaleas, Kalmias, Rhododendrons, Heaths, &c., require a peaty soil. Indeed it is heresy to say otherwise. I wish some of these "American Nurserymen" you alluded too in a late number, could accompany us into the woods and see the Kalmias growing on strong clay. The fact is, none of these plants incline to root deep. Their small fibrous roots ramify on the surface in the debris of decayed leaves and vegetable matter, and before we commence the extended culti-

vation of the Heath, let us have a suitable pot, that is, wide and shallow, 12 inches in diameter and 6 deep; larger and smaller sizes of course, but in proportion to the above; and, with loamy soil instead of peat, America will soon be as famed for large Cape Heaths, as she is already in the production of big water lilies.

This savours much, you will say, of exaggeration, but I believe it to be truth. Heaths grow much more luxuriant here than they do in England. The protracted mild weather of Autumn, and the bright winters, keep them constantly on the move. They do not like much heat, or rather, they dislike aridity. With suitable humidity in the air they seem to stand well enough during summer. Some few years ago a dozen or so of young heaths of various sorts came under my care, and not having any peat to put them in, I potted them in loam. Being well aware that much more depended on the physical than the chemical properties of the soil, I selected the turfy and least decomposed portions and mixed it largely with charcoal, the better to secure porosity. I question if ever heaths made a finer growth than these. They tripled their size in twelve months. They were not removed out of the green-house at any season. During summer they occupied the front shelves, no air being admitted at this part of the house, and were at least once a day watered overhead through a syringe, the house kept shaded, damp, and comparatively cool, frequently 10 degrees below the external temperature.

In an article on the culture of Heaths, which I sent to the "Horticulturist," in 1849, among other remarks on soil is the following: "A good substitute for peat will be found in turves from old pastures, cut thin, collected in dry weather, and piled in a heap two or three months before using, so that the vegetation on it may be slightly decomposed. Both in its chemical and mechanical properties, such a soil is nearly all that can be wished. In preparing it, however, it is better to chop it up rather fine, securing a proper mechanical texture by the admixture of coarse sand, broken charcoal; or even a few rubbly pebbles or broken potsherds I have used to advantage in keeping the soil open, to allow free admission for atmospheric gases—an essential point to be kept in view in the

cultivation of plants, more particularly those in pots, for they are then entirely dependent on the cultivator for those conditions they receive in their natural habitats. Such a soil as here recommended, kept sufficiently open by any of the above mentioned ingredients, is easily penetrated by air, thereby increasing its temperature, and facilitating the decomposition of organic matter; during which process various healthful gases are supplied to plants. In a soil thus conditioned, experience has convinced me that *all* kinds of green house plants can be grown to great perfection, if properly managed in other respects."

Further experience has tended to corroborate these views. I seldom make any distinction in soils unless for experiment. Heaths, Geraniums, Azaleas, Achimenes, Epacris, all potted out of the same pile. Rotted turves, charcoal and sand suits every purpose.

In a small house, constructed as described by your correspondent at page 326, last volume, the Heath could be easily managed. Instead of plunging the pots in ashes, I would prefer the bottom of the pit made water tight, and a few inches of water kept in it during summer. This could be cheaply constructed: a paving of bricks laid in cement would answer every purpose. Many other plants besides Heaths would here find a congenial summer residence. Of course the pots would be elevated above the water. In this way I am confident the Heath could be grown to great perfection. Even in a mixed green-house, I have at the present time some plants in pure loamy soil in the most robust health. The above remarks, therefore, are not theoretical, but the result of observation in practice.

WM. SAUNDERS.

Baltimore, Jan., 1853.

MESSRS. EDITORS:—I have just perused the last two numbers of the "Florist," which have made such an impression on my mind that I shall not be able to sleep until I have communicated to you my reflections, and congratulated you upon the new discovery of "Experiment." Ah! we have at least the hope, "perhaps," to see another Chiswick. It is really comforting. A Chiswick, in a north or north-east aspect, between four brick walls, four feet six inches

high in the back, &c. How pretty that will look! above all when one will be poking his nose through those miniature holes, 6 or 8 inches above ground. But don't you think chilly Boreas will also try to poke his whistle in those holes, especially from November to April? Oh! but Experiment will not open them during that time. Then they will be of no use. There is another thing that puzzles me exceedingly; it is, how those Chiswick Heaths, 4 feet high by 4 or 5 across, will stand in that space, 30 inches high or thereabouts? I hope I shall live to see these plants, 4 feet high, in a conservatory two and a half;—it will be really miraculous.

Your lover of Heaths is a man with whom we can talk reason. I do not know if he has corns, but he gets along pretty smartly—only, before beginning his heath gossip, he ought to have headed it with the quotation on page 328: "*Quot homines tot sententiæ.*"—Heathologists are like Pomologists about the qualities of Pears—every one claiming the pre-eminence for the new sorts which he has just fruited for the first time. However, I feel obliged to say, that we Heath-growers do not agree as well as Pomologists. Every one of us has his own saying about the way of growing them, and will not admit that they may be wrong. The fact is, that we do not grow any at all, which is the reason of every one being right. One says it is too hot in this country; another, it is too cold; another says there is *no good peat* in this country, no proper place to grow them in—they want shade—no, they want the full exposure to the sun. Kept in doors all the time is the only way; they do best north, in Albany for instance; Albany gardeners say Montreal is the place; in Montreal, Quebec is the right spot—perhaps Baffins' Bay or Behrings' Straits would be better. I think the polar night would be good shading for them, they would not be apt to grow spindling or get mildewed, and would be more likely to grow to a size to fit the enclosures of brick walls. Perhaps an ice-house or an Artesian well would be good for them? We do not know.

"*America is not too hot for Heaths.*" I indorse this sentence, and we will see, if we live long enough; so take care Chiswick, or we will beat you—with the tongue if in no other way; we shall beat you *without peat*, that *sine qua non* of almost all European cultivators and writers. To grow plants without it, seems to be a horticultural heresy. I thought so too; but I heard lately a gardener say that

but I heard lately a gardener say, that he could show some New Holland plants, such as, Polygala, Calothamnus, Acacia, &c., grow in a soil in which he would defy Sir Humphry Davy, Gay Lussac, or Leibig himself to find peat, any more than in his night-cap:—
Do you believe it? I do. ANTHOPHILUS.

FRUIT TREES.

Mr. Editor:—If you will permit me to lay a plain approval of a few select fruits, before your readers, perhaps some of them may be benefited thereby. The writer has to his great loss, planted many sorts of Pears, which he has now to graft over again after they come into bearing. The very complimentary manner which nurserymen and book-makers have in setting off their descriptions, makes green-horns pay double, or plant twice. I am sensible that Pears that are very fine to some, are only so-so to others—all depends upon the qualifications of the judges. Ten years ago, the Bloodgood Pear might be highly esteemed by some, and the Summer Bonchretien admired by others; whilst the Bartlett was looked upon as unsurpassable. Now a-days the two first are not worth culture, and the last is classed amongst the best. Unfortunately for us our fine native kinds have been set aside or neglected, because they are natives, and Napoleon, Flemish Beauty, Beurre Capiaumont and some other foreign sorts sought for, that after trial prove worthless. Fruit growers are much indebted to your fellow-citizen, Dr. Brinckle, who has brought into just repute many of our esteemed native fruits. I write this almost under the shade of a native Lodge Pear, whose towering head is at least thirty feet high, and its fruit is sold in Philadelphia market at 50 cents a half peck, and I heard a neighbor farmer say, that it brought that price twenty years ago. That tree is worth an acre of wheat, and does not cost one-tenth of the labor. I have said more than I intended, but now for my list. Some other of your many readers may correct it and do better, which I will be happy to see. The following 17 sorts are named as they ripen, and will be in eating from July to February—they can be had of any good nurserymen:

Summer Butter, medium size, pear shape,
 Tyson, under medium size,
 Rostiezer, do do do
 Stienmetz's Catharine, beautiful long fruit, nearly medium size,
 Ott, very similar to the Seckle,
 Bartlett, large long fruit, yellow when ripe, sells in Philadelphia
 market at six cents each,
 Washington, medium size, long shape,
 Seckel, under medium size,
 Louise Bonne de Jersey, long large fruit, color of the Seckel,
 Fondante d' Automne, large round fruit,
 Van Mons Leon Le Clerc, large long fruit,
 Lodge, brownish yellow, medium size,
 Kingsessing, half round or nearly round, above medium size,
 Duchesse d' Angouleme, very large, frequently weighs eighteen
 ounces, very good for either kitchen or table—October,
 Vicar of Winkfield, November, large long fruit, great bearer.
 Beurre d' Aremberg, very large, yellow when ripe in December
 and January,
 Jaminette, round, greenish yellow when ripe in January and
 February, medium size.

Another very important item to purchasers, is to procure good
 roots with their trees, the size of the trees in my estimation is of
 minor importance compared with the durancy of the article. The
 Pear flourishes best on a rich loam, with a dry bottom. Spent
 ashes, bone dust and charcoal in equal proportions, giving each tree
 half a peck of the mixture, will greatly promote their growth.—
 The soil eight feet in diameter and eighteen inches deep, should be
 well prepared, by digging, or thorough subsoil plowing, giving a
 very liberal supply of decayed barn-yard or street manure; these
 articles can be used at once, though we deem it advisable to work
 the ground one year previous to planting, and have it in perfect
 order—the trees will repay the labor in five years; obtain them if
 possible on the Angers Quince stock, and they will produce fruit the
 second year after planting. After the tree is securely planted, cover
 the soil with litter of any kind. Tan has been much mentioned for
 this purpose, and on light sandy soil is very advantageous, but on

heavy soils has been injurious, not only to trees but to strawberry beds.

Now, sir, if these rough notes are of any use to you or your readers, you will hear from me again, on some other fruits.

Chester, January, 1853.

G. T.

PRIZES IN HORTICULTURAL SOCIETIES.

In the different horticultural and floricultural societies in England, we continually notice premiums in cups and in money offered by private individuals, for the best collections or for single varieties of their several favorites. Nurserymen offer premiums for new seedlings of show flowers; and we all know what prices are asked and obtained for some of these acquisitions.

Different societies are formed there for the encouragement and exhibition of different flowers, as Hollyhock, Pansy, Chrysanthemum and Dahlia societies.

We should like to see private prizes offered here, (under the direction of the different societies,) for any object which may tend to improve either the growth or variety of our plants, or to increase the knowledge of and love for botanical science.

We re-publish an offer from our last number, made by a responsible party, giving to any one who will exhibit six good plants of *Ericas*, of certain sorts named, or like sorts, eighteen inches or two feet high and bushy in proportion, *Ten dollars*, and for *Boronia serrulata* and *Hovea Celsii*, two feet high (erroneously printed 3 feet) and as much through, *Fifteen dollars*—\$25 for the eight plants—open to all the country: at any Horticultural exhibition in the United States. We hope to see the first prize, that for Heaths, taken in this city; but we think that for the latter there will be no competition for some time yet.

We would be glad to receive more such offers: and we think that if the system were started, the premiums offered by our societies would be much increased.

Now we propose to do a little of this on our own account: premising that what premiums we offer, shall be through the Pennsylvania Horticultural Society and for plants shown at their rooms.

We will give			
In April.	For the best three varieties of Auriculas in pots	\$2 00	
	“ “ 2nd best “ “ “	\$1 00	
In May.	For the best Pinks, 6 plants in pots	\$1 00	
	“ “ “ Stockgilly	\$1 00	
	“ “ “ Wallflower	\$1 00	
In June.	“ “ “ specimen Fuchsia	\$2 00	
	“ “ 2nd “ “	\$1 00	
In July.	Best 6 varieties Hollyhocks	\$1 00	
	“ 3 “ Delphiniums	\$1 00	
In Nov.	Chrysanthemum, best specimen, large variety, grown on a single stem	\$3 00	
	“ 2nd best	\$2 00	

All these to be submitted to the regular committee of the Pennsylvania Horticultural Society and the prizes awarded by them.

In addition to these, as we have very much at heart the increase of interest in our native plants, we offer *Five dollars* for the best collection of Native orchids, grown in pots, shown in bloom at any meeting of the society, in this year or the next, the writer intending if possible to win the prize for himself.

We hope that our example, though we are obliged to offer such premiums as we can afford, will stimulate some of the gentlemen of ample means, who are as anxious as we for the prosperity of horticulture in this country, to offer more liberal ones through the societies of their neighborhood. In this way the efforts of these institutions would be much aided; and greater encouragement given for the growth of fine specimens. ED.

For the Florist and Horticultural Journal.

(Not the least interesting feature of your improving Journal, (at least to me, and I presume to many others also,) is that which refers to, or notices new and rare plants. The time of “hiding our lights under bushels” is now past. No keeping plants ten or twelve years as Loddiges used to do, without letting the public know where they were or what they were. Lovers of plants are now almost daily inquiring, “What is there new?” or “Where is it to be had.”

- The Florist does its duty nobly and promptly, in answering and sometimes

anticipating the above interrogatories. Still it cannot be expected that the editor, or his numerous correspondents around the Quaker city, can be acquainted with all that is new in other large cities, as New York, Boston, &c.

I have been induced to make these remarks, from having noticed in your Journal recently one or two good lists of plants. I would like to make an addition to two of these, viz: of Pelargoniums and Chrysanthemums, of several varieties, which have come under my observation about New York during the past summer and fall, and which I would recommend as first rate.

Pompone or Daisy Chrysanthemums. *Eugenie*, dark orange red, *Amande*, purplish crimson, *Ninon*, white, tipped with rosy purple, excellent habit, *Argentine*, silvery white, good flower and a profuse bloomer, *Sacramento*, golden yellow, *Henriette Lebois*, shaded rose, *Jongleur*, orange yellow, very double and compact.

Fall varieties. *Gerbe d'Or*, large compact yellow, *Pius IX*, crimson, bronzy gold edged, *Lady Talfourd*, good white, *Peruvienne*, fine golden yellow.

I have called the above "Pompone or Daisy," still I think that there should be a distinction made between them: for instance all those of which *Matricariodes* is the type, and there are now three or four of them, as *Lola Montez*, *Tom Thumb*, &c., Daisies, and the others Pompones.

Pelargoniums. I will omit the colors, but these are new and first rate show varieties: *Duke of Cornwall*, *Field Marshal*, *Gipsy Bride*, *Salamander*, *Crusader*, *Magnificent*, *Ajax*, and *Ocellatum*.

As this is the time for setting the Fuchsias to work, and as there will be premiums offered for them at the forthcoming exhibition, I give you a list of the best 6 as far as I am able to judge: *Madam Sontag*, *Pearl of England*, *Elizabeth*, *Clapton Hero*, *Sir John Falstaff* and *Voltigeur*. The first three are light varieties, and the latter dark.

New York, January 18th, 1853.

W.

We are much obliged to our correspondent, and hope he will continue his notices, not only of florist's flowers, but of any new introductions which he may meet in the collections in New York and its neighborhood. Many fine plants are imported by the nurserymen there, but we do not know whether amateurs import plants, as is done here to so great an extent by them.

As to the six Fuchsias, we think that with *Fair Rosamond*, *Diadem of Flora* and *Expansion*, light, and *Attraction*, *Sir John Falstaff* and *Voltigeur*, dark varieties, we could beat his six. *Attraction* is the best colored dark variety we have ever seen, and has the fullest corolla.—Ed.

We have received the schedule of premiums offered by the New York Horticultural Society for 1853.

GARDEN MEMORANDA.

In a visit which I lately paid to the greenhouse of Mr. Erastus Corning, Jr., I saw some specimens of plants, which delighted me, and which even you Philadelphians, accustomed to see *Phalænopsis amabilis*, *Nepenthes Rafflesiana*, *Victoria regia*, &c, must admire. One of which was the very old *Arbutus andrachne*, loaded with more than two hundred racemes, or rather panicles, of its beautiful, and withal deliciously fragrant flowers. Like Sir William Hooker, who described *Hoya bella* "as an Amethyst set in frosted silver," I would call this plant a wreath of pearls studded with diamonds: which would not be an exaggeration. The only fault this plant has is, that it had the misfortune to have been introduced into European gardens more than a century ago, and into America perhaps twenty or thirty years; yet it is very rarely to be met with, or because it has no credentials from Messrs. Low or Henderson, Van Houtte or such persons. If it had been lately brought from China by Mr. Fortune, like that Two colored humbug of a colorless rose, then it would be fine; we would ask one another, "have you seen that new Chinese plant?" "Yes, ist'n it superb," One of the best plants I have seen for many years." It is not only a fine winter flower shrub, but is nearly hardy, and as easy of cultivation as a lilac. I send you a panicle of its flowers, so that you may judge for yourself what this plant must be; it is seven feet high, with a head about four feet across like a Chiswick Heath, and in fact somewhat similar in its flowers to an Erica. In the same house I saw an *Opuntia Brasiliensis*, nine feet high, and strong in proportion—it is truly a noble plant. *Op. leucotricha*, Dec., upwards of five feet high, and four feet across; this as you are aware, is clothed with long hairy spines, something like *Cereus senilis*. But enough of Cacti, some will say; then what will you say of another old plant, *Polygala cordata*, having a stem thirty inches high and thirteen inches in circumference even with the ground, bearing a compact head thirteen feet in circumference! do you know many like it? And all this has been done without the least peat; or of that other, equally old native of Van Diemen's land, *Calothamnus villosus*, four feet every way, and covered with buds. There were also there, *Virburnum nitidum*, (shining leafed *Laurustinus*) six or seven feet high, with a head something like fifteen feet in circumference, and well proportioned. But a description of all the good plants here would take up too much room. I must mention that in the same establishment under the management of Mr. M. Walsh, are several fine *Epacridæ*, which had stood all the summer fully exposed to the sun, and were *not killed*. There is also a splendid lot of *Camellias*, which were raised in Philadelphia, but which have improved wonderfully since brought from there.

From Mr. Corning's I went to the place of Mr. Joel Rathbone, which is far handsomer than Mr. C's as a landscape, but which is not so rich in exotics. I noticed there with pleasure, an *Erica Braziliensis*, a Chiswick Heath

in miniature, about two feet every way, covered with flowers; an *Acacia pulchella*, with a head of rare elegance; *Polygala dalmasiana*, the best variety in cultivation, having flowers of the size of *P. grandiflora*. and the brilliancy of *P. cordata*; an *Erica rubida*, one of the most elegant of the whole genus; some fine *Epacridae*, and a lot of *Pelargoniums* trained in the English fashion, which I hope will make fine specimens next summer: they are in good hands for that. Mr. Wm. Gray is gardener to Mr. Rathbone, who with Mr. Corning, I understand are going to overtop you, or at least to equal you; we shall see however. I wish that one of them at least, could eclipse Mr. Cope's Orchideæ house, but that I fear would be a tough and long job.

L. M. Albany, N. Y.

At Mr. Dundas' houses are generally to be seen in bloom some rare plants. We saw there last week a fine spike of *Dendrobium nobile*; two fine specimens of the very free blooming *Goodyera discolor*; the white flowered *Brassavola caudata* and a *Gongora*, and one of the best heads of *Aeschynanthus pulcher* we have ever seen.

At Mr. Lennig's there was in bloom a beautiful *Camellia*, the variety *Duca Visconti*, a good shaped flower, shaded with pink, and striped with a deeper shade. This collection contains some of the choicest varieties of this genus ever sent out.

At Mr. Knorr's, in West Philadelphia, we saw *Franciscea latifolia*, a handsome, free blooming species; the yellow *Ruellia McDonaldii*, *Eriostemon intermedium*, *Epacris candidissima* and *hyacinthiflora*; the new double *Primula sinensis*, and a fine bloom of *Azaleas*.

FRANCISCEA EXIMIA, (noticed in last number.) After all attempts to make this plant bush out and look handsome had failed, I let it go up as it liked. It has lately produced its flowers. They are the largest of the family, each being near an inch and a half in diameter, of a pale blue color; the leaves are three inches long, with the edges much undulated. My experience leads me to believe, the best treatment for it is a soil composed of equal parts loam, peat and sand, in a warm stove, with an abundance of light and air. It is a very strong grower.

PLUMBAGO ZEYLANICA. The seeds of this plant were presented to Mr. Cope by Mr. Ezra Bowen, who obtained them from the Calcutta Botanic Garden. It was introduced into England above a hundred years ago, but has been long lost to collections there. I introduce it into this list, as it is probably the first plant that has been introduced into the United States.—The flowers are rather smaller than those of *P. capensis*, but of a pure white; the leaves are nearly round; it is easily grown in a light stove, but soon "damps off" in a cool damp atmosphere.

T. MEEHAN, gr. to

C. Cope, Esq., Springbrook.

BEDDING PLANTS.

We were asked by a subscriber to give in the *Florist* a list of good herbaceous plants, hardy and annual, for bedding, the list which was given in the calendar, in a former number being objected to, on account of the use of botanical names. It happens however, that some of our most useful plants have no English names, or are better known by their botanical appellation. Petunias, Nierembergias, Campanulas, (who calls them Bell flowers?) Coreopsis, or "Tick seed," Spiræa, Verbena, for instance. We shall have prepared such a list of names as we can gather, which we hope will prove satisfactory to all our readers.

THE GREEN FLY IN GREENHOUSES, we are informed by the *London Gardener's Companion*, may be effectually destroyed as follows: Provide a strong solution of nitre in water, in which soak some sheets of strong brown paper, and afterwards dry it slowly, and cut into lengths of convenient size, the largest eighteen inches by twelve inches; then get some strong tobacco and strew it thinly over the paper, and with a coarse pepper box, dredge in a good coat of common Cayenne pepper; wrap the whole up loosely like a "cigarette," paste the end over, and when dry, suspend two or three by a wire in different parts of the greenhouse, and it will soon settle the accounts of all intruders with very little trouble or expense,

TO PREVENT MILDEW.—Mildew is one of the greatest pests of greenhouses and all sorts of plant structures. The following remedy has been tried in the houses of the London Horticultural Society, and it is thought will prove efficacious: "Sulphur and unslacked lime put into a tub of water, in which they are quickly and intimately mixed, and the trees and plants syringed with the clear liquid after these substances have settled at the bottom."

The monthly meeting of the Pennsylvania Horticultural Society, held on the evening of the 15th inst., was one of the best exhibitions we recollect. There were five collections shown, besides several specimen plants and new introductions. The cut flowers were very beautiful; the fruits fair, (in quantity,) and good vegetables were staged. Mr. Buist, besides the six specimens shown for competition, exhibited seventy-three varieties of Camellia blooms. We hope that such displays will continue through the year.

The Secretary's report and the lists of plants shown, will be found on other pages.

GARDENIA FORTUNI.

Among the different species now in cultivation of this highly fragrant and favorite genus, none perhaps possesses more especial claims on our notice than this fine plant. Its beautiful double flowers, measuring from three to four inches across, of the purest white, embosomed in its fine glossy foliage, are exceedingly attractive, each blossom forming, as it were, a bouquet in itself. This species is one of rapid growth; and under good management, large bushy specimens may be obtained in a comparatively short time. Unlike the other double-flowering kinds, it blooms once only in each season; but as it continues for some time in flower, a few succession-plants will suffice to prolong the blooming period through a considerable portion of the summer.

The propagation of this plant is most easily effected by cuttings of half-ripened shoots of the young wood taken off with a heel, cut smoothly over, and inserted in silver sand in a well drained pot, and afterwards plunged in a gentle bottom-heat, and covered with a bell-glass; five or six weeks will generally suffice for their becoming well rooted, when they may be potted off singly into 4-inch pots, and again placed in heat. Supposing the cuttings to have been taken in June or July, the young plants, when well established, may receive a second moderate shift, and be continued in growing heat, as before; care should, however, be taken not to keep them growing too late in the season, as that prevents the ripening of the wood before the dark days of November comes on. When the plants cease growing, they should be removed to a cooler situation for the winter. A temperature of 45° to 50° will suffice during their period of rest, at which time water should be sparingly but judiciously given them when required.

Presuming plants have by this means been provided, or a young healthy stock obtained from the nursery about the beginning of March, the best should be selected and plunged in a gentle bottom-heat, in a temperature of from 60° to 65° , to start them into growth; when this commences they should, if in good health, receive a liberal shift—say from a 5-inch to a 9-inch pot, care being taken to remove any impure soil, and to gently disentangle the matted roots, without destroying the ball more than is necessary. After

re-potting, the plants should be plunged as before, and encouraged into vigorous growth. With the increase of solar heat at this season, a free use of the syringe should be resorted to on all favorable occasions, using water of the temperature of the house or pit in which the plants are placed; during bright sunshine a slight shading should be provided, any indications of flower-buds removed, and the points of the stronger shoots topped, to preserve a dwarf bushy habit. When requisite, a second shift should be given into 13-inch pots; and afterwards the same treatment continued as before.— With due attention to air, water, stopping, and tying out the branches, fine compact plants will be obtained. A little observation will show the cultivator how far stopping will be beneficially consistent with the due production of flower-buds, when this is secured, the plants may be gradually hardened and wintered as before.

If the plants are required in bloom at an early period of the following summer, say May, they should be placed in heat by the early part of February, or later, as may be required; when the blooms begin to expand, the plants may be removed to a warm part of the greenhouse or conservatory. After the flowers are exhausted, the shoots may be pruned back to a well-placed joint, and the plants removed to a close situation in heat, until the buds have broken freely. At this time they will require repotting. If the pots are well filled with healthy roots, a larger shift may be given. The required size must, however, now be determined by the convenience or inclination of the cultivator; but I may state, that *G. Fortuni* is a free-rooting plant, and the flowers are usually larger and more abundantly produced when allowed plenty of pot-room; if want of space does not allow of large pots being used, the ball of soil should be considerably reduced, and the plants repotted in the same sized pots; in this way they may be kept in vigorous health for some years; and when eventually overgrown or unhealthy, they may be replaced with some of their young and vigorous progeny.

I find this *Gardenia* to luxuriate in a compost of equal parts of fibrous hazelly loam and peat soil, broken up in a rough state, ad-

ding a sufficiency of sharp sand to preserve porosity in the soil.—With the above a liberal supply of charcoal, broken to half-inch size, is mixed: this acts as a fertiliser, and assists in keeping the soil in an open, healthy condition. Any more stimulating matter I prefer applying in a liquid state during the season of growth, when a watering twice a week with clear manure-water is highly beneficial. Should that tiresome pest the mealy bug make its appearance, no time should be lost in its extirpation. This is most successfully accomplished by taking the plants outside the house, and, after laying the pots on one side, well syringing the foliage with water at 150°; by repeating this after an interval of a few days, the insects will be destroyed without injury to the foliage, or impairing the health of the plants, which should be carefully shaded for a few days after each operation.

ALPHA, in *Gard. Chron.*

WEARING OUT OF THE VARIETIES OF FRUITS.

MR. EDITOR:—I have always disbelieved the ingeniously supported theory of Mr. Knight, on the natural degeneracy of varieties not renewed by seeds, from having seen trees of the Golden Pippin apple, which was one of the varieties instanced, thriving remarkably well and bearing good crops of fruit. They were growing in a *very stony* soil, and in a warm situation; and I incline to the belief that in such situations it would still do as well as any other kind. I should be glad to learn from some of your readers whether they know of any place in America, where it is doing well, as I incline to the opinion that our country is well fitted for its growth, and that a thriving trade might be carried on with the Londoners with it, who prefer it to any *Newtown Pippins*, *Lady apples*, *Rhode I. Greenings* and *Spitzenbergs*, which we now send them. I do not much believe in this innate degeneracy, for in addition to my reasons above, I saw last fall near Philadelphia, a large tree of the old *English* autumn Bergamot, a variety *literally* as old as “Julius Cæsar,” in perfect health, and bearing in abundance. Yours,

Philadelphia.

JULIUS.

CALENDAR OF OPERATIONS.

FRUIT.

PLANTING TREES.—This subject has been alluded to in previous calendars, where the relative merits of fall and spring planting were discussed. Those who prefer planting in spring will be making preparations, and it is well to have every thing in readiness before ordering them from the nursery, that no delay may occur in getting them set out when they come to hand. The shorter time that elapses between removal and planting the better. Should they unavoidably be so long out of the ground that the roots and smaller branches appear shrivelled, they may still be brought round by careful management. The common remedy for all unhealthy indications in a newly planted tree is copious waterings at the roots. It is, however, quite an erroneous one, and if persevered in, will in most cases prove fatal. The branches should be kept moist, and the roots comparatively dry. We have seen trees that were quite shrivelled and dried up, completely recovered by laying them on the ground, covering the roots with soil, and enveloping the branches in wet straw. There is plenty of water in the soil at this season for vegetation, without any artificial applications. It will be of more advantage to raise a small mound of earth over the roots, to throw off heavy spring rains, to be afterwards levelled down, and its place supplied with a mulching of some description, to retain moisture in dry weather.

PRUNING.—It has been recommended to "shorten in" the young branches of peach trees in early spring. We cannot altogether endorse the practice, as it creates a tendency to over luxuriant growths and unfruitful shoots, but where summer pruning was neglected it will be necessary to a certain extent. Experience proves that on established fruit bearing trees, judicious summer pruning answers every purpose for which pruning is intended. All stone fruit trees are impatient of much cutting with the knife, inducing as it does canker, gummy excretions, &c. Cutting away the immature points of shoots may be necessary in a less propitious climate, but there is no occasion for such treatment here. When large branches require to be thinned out, it can be done most advantageously when the

tree is in full leaf. Orange and lemon trees are usually kept more for ornament than use, and in many cases they are little adapted for either. Healthy orange trees are the exception, and scraggy, denuded subjects, the rule. This is more to be wondered at, as they are naturally of a free, hardy growth. The principal points in their growth is to drain the tubs well, give them fresh, loamy soil, mixed with about one-sixth charcoal—let them have a plentiful supply of water while making young shoots, with occasional syringings over the foliage. If placed out of doors during summer, cover the surface of the soil with moss or some such material, water regularly, but with discrimination. Towards the fall let the waterings be less frequent to hasten the solidification of the young wood, and from the 1st of November to the end of February give no water at all, unless they are under the influence of much artificial heat, which they ought not to be; if managed as above they will winter well in a close house or cellar without heat, 10 or 12 degrees of frost will do them no injury.

GRAPES IN DOORS.—In cold houses all will be at rest, vines tied down horizontally until they break into growth. There is no fruit bearing plant of equal importance, so easily managed as the grape. Failures may be traced in the majority of cases, to extra care, rather than neglect. Those who have no accommodation but a greenhouse may still regale themselves with this delicious fruit, by growing a few in pots. Now is the time to set about it. This system of growing grapes is practised to a large extent, and very fair crops secured.—single buds are selected from stout, well ripened wood, potted singly in small pots, and placed in a warm temperature; they are shifted progressively, and receive every encouragement to make a strong growth. Shoots twenty feet long by the end of August are attained in this way. We have seen grapes, not a single bunch, but in quantities, from plants fifteen months old. These have to be grown in a high temperature; in a greenhouse they will require two years' growth before fruiting. Cuttings put down at this time may be placed in a 6 inch pot when well rooted, to remain for one year; give them plenty of water during summer, and do not pinch or prune any of the shoots—the growth will mature early in the fall. In November prune them down to eyes and place them under the stage in the greenhouse; on the first indication of growth, which will be early in the following February, shift into larger pots, in decayed turfy soil, always paying particular attention to

drainage. These pots being filled with roots they may be placed into others 12 or 14 inches across, where they remain to fruit. Keep them in the house until the growth is completed, afterwards a few weeks' exposure will be beneficial; prune in November to lengths of 6 or 8 feet—they will produce from 6 to 10 bunches, according to strength, during the following summer.

Nectarines, Peaches, and Cherries may also be grown in this manner; they require very little care when once established, and will ripen fruit five or seven weeks before it can be had out of doors.

Strawberries in pots, if brought into the greenhouse during last month, will be coming into flower. Let them have plenty of fresh air during favorable weather while the sun is warm, and keep cool at night; a night temperature ranging from 45 to 55 degrees will be sufficient—if lower, all the better, although they will not ripen fruit as early. A top shelf near the glass is indispensable; supply water freely; liquid manure may be used with benefit after the fruit is well formed, but not before.

S. B.

The severest weather being past, spring work advances, and it is one of the most essential points in good gardening to be continually looking ahead. The object should be to get work done in advance of the season. With the best efforts to that end, we shall find that we are only "just in time" after all.

FLOWER GARDEN.—As soon as the weather will permit, all alterations, new walks, turf-laying and so on, should be *driven* to completion. Walks are very seldom well made in this country; the underdrains which we rely on so much in Europe, are very little use here. The large amount of dust washed away suddenly by our heavy thunder showers, chokes the drains easily; and in other cases the amount of water is suddenly so great that but a tithe of it can make its exit from the surface through the grating. Having experienced their insufficiency, I have in my practice turned my attention rather to the providing of surface courses. Where a gravel walk has a great fall, I have been able to keep the gravel from washing away by "pebbling" the outsides three, four or five inches in breadth, according to the length of the walk, before an opportunity occurred to throw off the water; small pebbles being used and the walk being about half-an-inch higher in the middle than at the outsides, the walk loses none of its neat appearance, while the object is effectually gained. If the walk is to be made on a piece of ground naturally wet, under-drains must of course be employed. Had I not seen so many scandalous specimens of draining lately, I should not think any directions necessary here. Drains are laid in so that they can't act, or soon become inoperative, when the report arises that "so-and-so expended vast sums on draining, and it has done no good." The bottom of the trench prepared for the drain—tiles, bricks, or stones—should be dug to *one regular grade*.

If one part of the drain be on a lower grade than the rest below it, dirt will lodge there and choke it; water will rise to its own level, and all escape, except what is in the low grade, but the earthy matter wont—it will all stay there. The eye can never be depended on in a grade; grading pegs should always be employed; after the drain is laid shavings, or something like it, should be placed thickly over it to prevent the soil from working its way in. By the time that rots the soil will have become compact. A drain like that will do good and be lasting. Those who have to make new beds of Roses cannot be too early in getting that job finished, as the sooner they are in the better. The same may be said of all deciduous trees or shrubs. It is a mistake which often proves fatal, to leave these things to “the last moment.”—The beautiful hardy plant *Weigela rosea* is not half so common as it ought to be; I see some of our florists announce a white variety. Where box edgings have become large and unsightly, the end of the month will be a good time to take them up for replanting.

The warm days will bring Hyacinths, Tulips, and so-on, planted out in the open ground, to the surface; the severe nights following these will often destroy the flower buds, unless a few inches of old tan, leaves, or ashes are spread over them. Herbaceous plants, if not divided or planted where wanted in the fall, should be done at the earliest convenience; they rarely do good when planted late in spring. Where the ground is dry and in good working order, most kinds of hardy annuals would be better sown about the end of the month; the earlier they are sown the finer they flower.

Finish pruning and tying up all ornamental vines, and get all things neat and in order.

GREEN-HOUSE.—*Pelargoniums*, *Fuchsias*, *Calceolarias*, and the like, intended for blooming, should receive their final shift this month, if the pots be well filled with roots. The former, if intended for specimens, will be much aided by “tying out.” A wire, with loops in it a few inches apart, fastened around under the rim, is the best thing for the purpose, the shoots tied down to it with twine; when they are growing well they are much benefited by manure water once a week or so. If the plants do not grow symmetrical, pinch back the strongest shoots to encourage the weaker ones. *Fuchsias* should never have their leader stopped, but be kept growing in a cool, moist temperature, with abundant light and air, repotted as often as the pots are well filled with roots into sizes a little larger; they are fond of a sandy loam with rotten manure in small quantity, well drained with charcoal; when properly drained they take a large amount of moisture. The red spider is a great enemy; watch closely for its appearance and apply the remedies pointed out in former numbers.

This and the next month will be the *Cineraria* season. There is much to be done in improving this race. Watch for the best flowers for seed; those which have two colors at least, broad petals, and regularity of outline—and save especially for seed the *first flowers* that open. Dahlias about the end of the month may be started; the best plan for an amateur who does not wish to raise a great quantity from one root, is to fasten on the labels securely, then lay in the roots in any warm place where the temperature is above 60 deg., side by side, covering them lightly with sandy soil and keeping them a little moist; they will soon send up a quantity of eyes or shoots, when the roots may be taken up and divided so as to have a portion of root with each shoot; when, potted in small pots and placed in a close warm place, they will soon make good strong plants.

So much has been said in this journal on Heaths and Australian plants generally, that although this is their most interesting period, I will do no more than refer to them.

HOT-HOUSE.—As the season becomes warm, more air is necessary; whenever giving air does not cause the temperature to fall below 65 it ought to be freely admitted. Every evening before closing up for the night the syringe should be used freely; the object gained is the prevention of great evaporation for a time, the roots in the mean time continuing to absorb moisture from the soil the plant is better able to withstand the great drain upon it caused by giving air and bright sunshine. I always also make a practice of sprinkling water on the paths and stages before giving air, and find great advantage result therefrom.

VEGETABLE GARDEN.—Having decided on what crops are to be in each portion of ground, and what others are to come into rotation after them, proceed with getting the soil manured and dug at every opportunity. Peas should be attended to first; the warmest aspect will of course produce them earliest—it is a first rate system to sow Peas where Celery is intended to follow, which, being well manured, will produce an excellent crop of Onions the following season. The Prince Albert is so far the earliest and best, next the Early May, or extra early. Where new Asparagus beds are to be made now is the time; the ground should be rather moist than dry, and be trenched two feet deep, mixing in with it a good quantity of stable dung, and, if the ground be inclining to sand, add some salt; the beds should be marked out four feet wide, and the alleys about two feet. If pegs are driven down at the corners of the beds permanently, they will assist operations in future years. Having marked the positions of the beds and procured a stock of two year old plants, place them on the soil nine inches apart in rows one foot asunder, making three rows in each bed; then cover the whole with soil from the alleys and rich compost a couple of inches.

To have Turnips good in spring they must be sown very early; they are hardy, and must be put in as soon as the ground can be caught right. * Sal-sify too must be in as soon as possible—it prefers a strong rich loam. Those who have no Spinach sown in the fall should do that right away; no amount of stable manure but will be a benefit to it, though guano, in even smallish doses, will kill it; guano produces excellent Cabbage, mixed with the ground while it is being dug for that crop. Cabbage, by the way, may be put in as soon as the ground is ready; and Potatoes are better in before the beginning of next month, if the ground is not too wet; many plant Cabbage between the Potato rows. The Early Manuel or Manly, I find one of the best early Potatoes. Onions are better put in early, but the ground ought to be dry when planted, and trodden or beaten firm when the sets are planted; the ground ought not to have rank manure—wood-ashes and pure undunged loam will alone produce an excellent crop. Parsley delights in a rich gravelly loam, and should be sown very early. Parsnips, another crop which should receive early attention, also delights in a deep gravelly soil, but detests rank manure. Lettuces and Radishes continue to sow at intervals. Herbs of all kinds are best attended to at this season—a good collection is a good thing.

T. J.

For the Florist and Horticultural Journal.

MR. EDITOR:—The elegant description of the emerald groves of Elvaston castle, from the graphic pen of your correspondent, has awakened in me the ambition to follow him, and make myself a name by becoming a contributor to the Florist.

I hope that the notice of those artificial groves of perpetual green, will create a more general taste among our more wealthy landed proprietors, for embellishing their pleasure grounds and beautifying their cottage residences, with groves and groups of winter evergreens; for what is a landscape, a park, or the grounds of a cottage without evergreens to cheer us throughout the dreary days of winter, and to screen us from the cutting force of Boreas. I say that without evergreens all appears for five months of the year, a desolate and solitary waste; but scatter a few groups around the cottage, and mark how changed the scene! behold these living ornaments of winter; while the rest of nature is asleep, fearlessly facing the storm, and cheering us with their mantles of green.

Do I hear some say that evergreens will not flourish here under our scorching sun, as they do in the humid atmosphere of Great Britain? But nature around you condemns the expression. Who that has travelled through our country in winter has not admired the native groves of Pines, Firs, Spruces, Junipers, Cedars, Arborvitæ, &c.; and our evergreen shrubs,

Rhododendrons, Kalmias, Andromedas, &c.; are these nursed by humid atmospheres? far from it; see the groves of Cedars and Junipers on the arid wilds of New Jersey; the Pine-clothed mountains of Pennsylvania and New York; and the variegated banks of our navigable rivers. They are found on all soils and in all atmospheres throughout our country. Am I asked why so many failures happen with the evergreens transplanted here, while they are so successful in Great Britain? I answer the fault is your own, and not in the plants; you employ improper persons to do the work, who have neither the requisite knowledge to prepare the soil nor to apply the treatment which the plants require: whereas in Great Britain they employ gardeners, whose education and industrious research have given them such knowledge—and herein lies the secret of their success; perhaps you have employed a man who calls himself a gardener, (and our community and especially cities, swarm with such GARDENERS, as Egypt did with locusts in the days of Pharaoh.)

There are many choice evergreens which flourish in Great Britain which would not do here in exposed situations, the following for example, *Arbutus*, *Aucuba japonica*, the Bay tree, Portugal laurel, *Laurestinus*, Sweet Bay, *Phillyreas*, Broom, Furze Heather, &c., and even our native *Rhododendrons*, *Kalmias*, &c. will not grow in the open sunlight here, as they do in Great Britain.

But I could enumerate over sixty different species of evergreens which will flourish with us, and a group of a score or a hundred of each kind, would be enough to embellish the most extensive domain I have yet seen in our country; much fewer would adorn the grounds of the cottage. I do not advocate having only evergreens in a place; I can see beauty in *Deciduous* trees and shrubs, I can admire stately elms, oaks, and sycamores, the symmetrical forms of maples, ashes, lindens, &c., the spire-like shapes of poplars, tulip trees, &c., the spreading horse-chestnut and the drooping willow, or the beautiful flowers and delightful fragrance of magnolias, and other flowering shrubbery: but on all occasions they should be accompanied by evergreens: for they are like butterflies, forsaking us when we most need cheer.

There is no risk in transplanting evergreens when done by a competent hand: and I say this from practical experience. I have removed arborescences 35 or 40 feet high and as much in circumference, in September, from the edge of the Hudson river, and planted them on an altitude three hundred above the level where they naturally grew, and not one ever lost a leaf or their verdure: and I have removed pines of the same dimensions, in spring, from the mountains of Northampton county, Pennsylvania, and transported them four miles, and planted them on flat land in Warren county, N. J. with the same success.

Let ladies and gentlemen employ proper persons to superintend, and let nurserymen be careful in preserving the roots when digging them up and

not a single failure will happen out of ten thousand evergreens transplanted.

Several eloquent articles have been written about "Parks" in America, but how dry the sermon, how barren the appearance, if these are not accompanied with groves of perpetual green.

February 16, 1853.

WALTER ELDER.

FLORICULTURE.

Under this head the Gardener's Chronicle has articles which we think contain valuable suggestions and information for our readers. We copy the following :

LEADING FLOWERS OF 1852.—On looking back to the past year, one can not fail to discover much that is intimately connected with the welfare of floriculture for the year which this day commences. We shall therefore give a short resume of such matters pertaining to the pursuit as may tend to point out what progress has been made, in order that our skill may be directed to the more easy attainment of that for which all should strive—viz: improvement. Let us begin with Camellia. Under this head, Countess of Ellesmere and Martinii are both valuable acquisitions to their respective classes; the former is white with delicate rose stripes, full, symmetrical, and of average size; the latter is perhaps the nearest approach to scarlet of any Camellia hitherto raised, and it is not wanting in other good properties. Gloire de Paris must likewise claim attention, as must also Mathotiana, the latter being remarkable for its large size: let us hope that this year some society may be induced to hold a Camellia show; so beautiful a flower deserves one. An annual display would at least cause the trade to stage the novelties of the season, a point itself of much interest. Among Auriculas (always slow "to move on,") Sir J. Moore (Lightbody,) is a first rate acquisition, and will doubtless be sought for by all growers who value excellence. Among the latest introductions the Lancashire Hero takes a foremost place. We wish, also, to see the Polyanthus in better keeping, a spring flower which few excel in cheerfulness of character and brilliancy of color; the latest novelty of any merit is Kingfisher (Addis;) this is a variety doubly welcome, as it is distinct from any in cultivation, and it possesses a high quality when compared with such a coarse flowering sort as George the 4th. It is small, certainly, nevertheless is worth a dozen of the variety just mentioned. Both the Auricula and Polyanthus may be said to have their head quarters in Lancashire, and it is from there we must look for improved varieties; let us therefore not be disappointed.

The following are the names of a few of the best varieties of Polyanthus, viz:—Alexander (Pearson,) Bang Europe (Nicholson,) Beauty of England (Maud,) Defiance (Fletcher,) Exile (Crowshaw,) Earl of Lincoln (Hufton,) George the Fourth (Buck,) King (Nicholson,) King Fisher (Addis,) Lord J. Russell (Clegg,) Princess Royal (Colliers,) and Royal Sovereign (Gibbons.)

The best named sorts of Cinerarias were Purity (Dobson,) a white self—Julia (Lochner,) white, very faintly tipped with light purple; Rosalind (E. G. Henderson,) white, narrowly margined with bluish purple; Star of Peckham (Ivery,) an improvement on Hammersmith Beauty, on account of its increased size and denser colors; Lord Stamford (E. G. Henderson,) white tipped, purplish lilac; Picturata (E. G. Henderson,) white tipped, rosy purple; Conqueror of Europe (Hodge;) Beauty of Hamilton Terrace (Rosher,) King of the Blues (Keynes;) Loveliness (E. G. Henderson,) colors blue and white; Marguerite d'Anjou (ditto,) crimson; Prince Arthur (ditto,) shaded crimson; also Charles Dickens and Kate Kearney.

NEW AND RARE PLANTS,

FLOWERED FOR THE FIRST TIME THIS SEASON, AT SPRINGEROOK.

No. III.

BELOPERONE AMHERSTÆ—An acanthaceous plant which, like all the tribe, without probably an exception, is well worthy of cultivation. The flowers, individually, resemble much the old *B. oblongata*—in color they are a few shades lighter. Its habit of growth and manner of flowering are very different from that species; instead of the erect habit, this is in its flowering shoots spreading, while the flowers, which are produced several together in the axils of the leaves, are erect, and appear above the leaves. It appears to be a free bloomer. Our plant was imported last year from Messrs. Lee, by Mr. Cope, and is thriving well in a compost of half peat and loam, and in the moist part of a dry stove, where the temperature is kept about 70 deg.

CANTUA BICOLOR.—This plant has a high reputation in the English papers. There it is recommended for bedding out. For these two years past it has been in the Philadelphia collections, but has been found difficult to manage, and has, I believe, never flowered before. It is customary to treat it as a stove plant, and herein I believe the error, as the order of plants it belongs to—*Polemonaceæ*—is unknown in tropical countries. It is allied to the *Phlox* and the *Ipomopsis*, more nearly resembling the latter in the shape and color of the flower, but it is nearly an inch across, and has a tube of the same length, the tube yellow and the limb crimson. My plant grew remarkably well last season in a shady part of a greenhouse, in burnt loam, and a little

sand. Towards winter it was kept rather drier than is customary with such plants, and it has lately bloomed, though not freely. I should be glad to learn whether others had been more successful, and if so, their mode of treatment. There are several *names* in existence, some saying they belong to distinct varieties; others that they are synonymous. Our plant was obtained from Mr. Buist.

IXORA INCARNATA.—This plant I have grown and flowered successfully this season. From Mr. Low, Mr. Cope imported it one year ago. The flowers are in heads as large as those of *I. coccinea*, but are of a deep pink or flesh color; the leaves are larger, and the growth of the plant altogether stronger. My plant is two years old, growing in a mixture of peat, loam, and chopped moss, and kept in a strong stove heat. At the present time it is about two feet high, and has ten of its beautiful heads expanded at once. It is a fine subject for a "specimen plant."

RHODOSTEMMA GARDENIODES.—A Cinchonaceous plant, imported last summer from Messrs. Lee, of London, by Mr. Cope. Though it is a free bloomer, each flower delicately beautiful, and highly odoriferous, I fear it will never become popular. The flowers seem to last but a few hours, and though there is scarcely a day without a flower open, the quantity of its dark shining green foliage seems very over-proportionate to the quantity of flowers ever open at any one time; each flower is about the size and shape of a *Pentas carnea*, but with a longer tube, erect, and of a rosy white. It does remarkably well in sandy peat, under-potted, and in a strong heat, in a moist stove.

JASMINUM NUDIFLORUM.—This Jessamine has the peculiarity of producing its flowers before the leaves, and are rather larger than *J. revolutum*; but are not of so bright a yellow. Its advantages are in blooming much earlier, and at a season when yellow flowers are scarce in our conservatories; *J. revolutum* seldom being in bloom before March, whilst this species will probably bloom the whole winter. It is now in several collections—our plant was obtained last spring from Mr. Buist. It is one of those plants that *will* grow however badly treated.

ÆSCHYNANTHUS PULCHER.—I have seen most of the kinds of this truly beautiful tribe that have flowered in Philadelphia, and consider this by far the best. The flowers are of a bright scarlet, full two inches long, and come out principally in clusters of six or eight at the end of the branches. Our plant was obtained last spring from Messrs. Hogg of New York, though I afterwards learned it had been previously imported into Philadelphia by Mr. Buist. It is considered a shy bloomer; but with me it blooms and grows beautifully under the following treatment: Last June it was potted in equal parts of burnt loam, peat, and cut moss, and grown till Septem-

ber in a shaded greenhouse; then it was repotted into a larger pot with the same soil, and placed in a warm stove, exposed to the full rays of the sun, and it is now flowering as freely as any one could desire.

THOMAS MEEHAN.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting was held, as usual, on Tuesday evening, in the Chinese Saloon. The President in the chair. To the numerous visitors in attendance on the occasion, the exhibition assuredly afforded some gratification. Many choice specimens of greenhouse plants were shown in the collection from four of our best conservatories. Among them a fine plant of the *Acacia pubescens* in full flower, from Gen. Patterson's house, stood prominent. A very well grown specimen of *Chorozema varium* in rich bloom, was seen in Mr. Keen's display from West Philadelphia. Frederick Lennig's gardener exhibited a fine table of Camellias and another of choice plants; among the Camellias was a plant of the famed Duc'a Visconti, displaying a beautiful flower, and shown for the first time. On the table furnished by R. Buist's foreman, were many choice plants, two of which were not seen before at our meetings, the *Epacris candidissima* and *E. miniata*. In Mr. Cope's collection of select plants, were a handsome *Abutilon Striatum*, and a new species, *Begonia Alba-coccinea*. Cut flowers of Camellias were brought from Mr. Buist's, Mr. Sherwood's, Mr. Lennig's and others. Designs and baskets of cut flowers were presented from C. Cope, R. Cornelius and R. Kilvington.

Thomas Hancock exhibited fine Easter' Beurre Pears. Mrs. Smith's gardener, five dishes of Pears. N. W. Roe, two kinds of Apples, and Robert Cornelius' gardener, three varieties of Apples.

On the vegetable-tables were to be seen from Mr. Cope's forcing houses—Cucumbers, French Beans, Tomatoes and Mushrooms. From Mr. Fisher's—fine Cucumbers, Mushrooms, Lettuce, &c. From Robert Cornelius', many good culinary articles. Thomas F. Croft presented a fine display of Rhubarb.

Premiums awarded were as follows:

Camellias.—For the best six plants to John Pollock, gardener to F. Lennig; for the best six cut flowers to Thomas Fairley, foreman to R. Buist; for the second best to Isaac Warr, gardener to John Sherwood.—*Primula simensis*—for the best six plants to Benjamin Gulliss. *Plants in Pots*—for the best twelve to John Pullock, F. Lennig's gardener; for the second best to Wm. Gracey, gardener to W. W. Keen, West Philadelphia; for the third best to Thomas Fairley, R. Buist's foreman. *Plant in a pot*—for the best, the *Acacia pubescens*, to Isaac Collins, gardener to Gen.

Patterson. Plants shown for the first time, a special premium of \$2 to R. Buist's foreman, for *E. miniata* and *E. candidissima*. Another of \$1 to Thos. Meehan, gardener to C. Cope; for *Begonia alba-coccinea*. *Bouquet design*, for the best to Thos. Meehan; for the second best to Thos. Megrahn, gardener to R. Cornelius. *Basket of Cut flowers*—for the best to William Hamill, gardener to Mr. Fisher; for the second best to Robert Kilvington; and for a beautiful display of Hyacinths, a special premium of \$2 to Peter Raabe. The Committee specially notice a fine specimen of the Camellia, variety Duc's Viscont, from F. Lennig's, an Italian variety, and shown for the first time. Also a plant of the *Cypripedium acaule*, a native, shown by H. C. Hanson.

Pears.—For the best ten specimens—Easter Beurre, to Thomas Hancock; for the second best, Glout Morceau, to F. Guoin, gardener to Mrs. J. B. Smith.

Apples.—For the best ten specimens—Newtown Pippin, to N. W. Roe; for the second best, the same kind, to Robert Cornelius' gardener.

Vegetables.—For the best display of an amateur gardener—to William Hamill, gardener to Mr. Fisher; for the second best, to Thomas Megrahn, gardener to Robert Cornelius; and a special premium to Thomas F. Croft for a very handsome display of Rhubarb, containing five named varieties.

An interesting ad interim report from the Fruit Committee was submitted, of the objects shewn before them since the last stated meeting.

Ordered: That the thanks of the Society be tendered to M. P. Wilder, of Massachusetts, for the gift of a copy of Dr. Harris' Report on Insects injurious to Vegetables, last edition, and the proceedings and Reports of the Massachusetts Board of Agriculture.

OBJECTS SHOWN—By John Pollock, gardener to F. Lennig, CAMELLIAS—Duchess d'Orleans, imbricata, Henri Favre, Miss Percival, miniata.—PLANTS—*Acacia longifolia*; *A. pubescens*, *A. conspicua*. *Gesnera zebrina*, *Begonia manicata*, *Euphorbia splendens*, *Azalea speciosissima*, *A. indica alba*, *Chorozema varium*, *Centradenia rosea*, *Camellia ochroleuca*, *Landrethii*.

By Wm. Grassie, gr. to Wm. W. Keen—*Acacia pubescens*; *Ardisia elegans*, *Azalea indica alba*, *Azalea coronata*, *Begonia manicata*, *Calla Æthiopica*, *Gesnera oblongata*, *Daphne rubra*, *Leschenaultia formosa*, *Spiraea prunifolia*, *Weigela rosea*, *Aeschynanthus Boschianus*.

By Thomas Fairley, foreman to R. Buist.—*Begonia manicata*, *Epacris carmtoniensis*, *Correa multiflora rubra*, *C. speciosa*, *Ixora coccinea*, *Rogiera amœna*, *Cyclamen coum*, *C. persicum*, *Daphne hybrida*, *Primula sinensis*, fl. pl., *Amaryllis Johnsoniensis splendens*, *Centradenia rosea*.

By Thomas Meehan, gr. to C. Cope.—*Hyacinth Penelope*, H. Prince Albert, *Ixora incarnata*, *Centradenia floribunda*, *Aeschynanthus pulcher*, *Oldenlandia Deppei*, *Goldfussia asophylla*, *Mahernia odorata*, *Cineraria seedling*, *Henfrya scandens*; *Verbena Orb of Day*, (Hovey's,) *Bilbergia pyramidalis*.

Collections of six *Primula sinensis*, by B. Gulliss, Isaac Collins, gr. to Gen. Patterson, T. Megrahn, gr. to R. Cornelius, and others.

PHILADELPHIA BOTANICAL ASSOCIATION.—At the close of the course of lectures on Botany, by Dr. A. L. Kennedy, alluded to in a former number, about twenty ladies and gentlemen, members of the class, organized themselves into a society for the mutual study of the science during the floral season. Officers were elected, a constitution adopted, and regular meetings provided for, which are held on Monday evenings, at the convenient room over No. 44 North Eighth street below Arch. The society is composed of amateurs, who, by the formation of a herbarium of indigenous plants and other means, propose to provide for themselves the best facilities for acquiring a knowledge of this attractive science.

There is a great deal in the following remarks of a private correspondent in the matter of exhibitions :

"There is nothing which requires the pruning knife of reform more than these—not in a captious manner, * * * but with judgment and independence.

There is no other means by which a taste for plants is fostered so much as by exhibitions of well grown specimens in flower—not in simply filling a room with plants more or less valuable, which comparatively very few can appreciate—but with specimens which show the untiring skill and patience of the gardener, and which strike the beholder as something worthy his admiration, and excite in him a desire of possessing a similar object.

In this way the interest of all is promoted—the tradesman by the increased demand for his articles—the amateur, by having superior flowers, fruits, and vegetables; and the gardener, by a proportionate demand and reward for his services.

Do try and impress upon the horticultural public, that because a man presents a plant or plants, he is not entitled to a prize, without any regard to their evincing any skill in their culture; and that such are not the purposes for which prizes are awarded."

The annual meeting of the National Agricultural Society has just taken place. A large proportion of the States were represented. The Hon. Marshal P. Wilder delivered an address, of which we have received a copy. Of Prof. Booth's paper on the "Chemical Analyses of Soils," the correspondent of the Germantown Telegraph says:—"The doubts and suspicions which it casts over the high-sounding professions of some of our modern philosophers created quite a stir. This essay, the property of the Philadelphia Agricultural Society, will, when committed to print, do some good, and must prove a wholesome admonition to empiricism." With which we agree entirely. The formation of an Agricultural Department by the government was recommended.



NEW VARIETIES OF DAISIES.

On Stone at the School of Design.

THE FLORIST AND HORTICULTURAL JOURNAL.

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Philadelphia, March, 1883.

No. 3

GERMAN DAISSIES.

BREITEN, JAMES S. L. N. R. O. D. CHICAGO.

It is difficult to any one who does not know what hybridization can do, and can do, to believe that those charming flowers which we figure this month, originate from the well known English daisy which is sold in our markets in the early spring. Having all the beauty

which is to be found in the English, while more beautiful and more varied in color, they present an almost every day flower.

The writer had the pleasure a few days since of seeing in bloom seven varieties equal in shape and color to those in the plate. They are new to this country, for like all herbaceous plants, they they did not to import, and it is not always that the seeds of the best varieties can be obtained from abroad. As a compromise, however, that several good ones were sent to me, to grow this year at the flower show at the Chicago Academy.

These varieties have been obtained in Germany, and in the same culture and perfectly hardy, they will be a valuable addition to the flower border, or would not be a charming edging to the

For the Florist and Horticultural Journal

BRAZILIAN VEGETATION.

The circumstances which compelled me to visit Brazil, and other countries, both ancient and modern, were for a desire to know the natural products of those countries in their native wilds, that they may be of some consideration likely to be desired for use. And the most interesting and important facts in relation to the history of the country, we now call from these notes the same as were made on the vegetable productions and the



THE FLORIST AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, March, 1853.

[No. 3.

GERMAN DAISIES.

BELLIS PERENNIS L. NAR. ORD. COMPOSITÆ.

It is difficult to any one who does not know what hybridization has done and can do, to believe that these charming flowers which we figure this month, originate from the well known English daisy which is sold in our markets in the early spring. Having all the beauty of form which is to be found in the Dahlia, with more beautiful, though as yet not so varied colors, they present an attraction to every lover of flowers.

The writer had the pleasure a few days since of seeing in bloom six or seven varieties equal in shape and color to those in the plate. They are new to this country, for like all herbaceous plants, they are very difficult to import, and it is not always that the seeds of the best varieties can be obtained from foreign nurserymen. We can promise, however, that several good collections of them will be shown this year at the flower show at the Chinese Museum.

These varieties have been obtained in Germany, and as they are of easy culture and perfectly hardy, they will be a valuable addition to the flower border, or would make charming edging to the beds.

For the Florist and Horticultural Journal.

BRAZILIAN VEGETATION.

The circumstances which some years ago induced us to visit Brazil, and other countries south and east of it, originated more from a desire to view the natural products of these countries in their native wilds, than from any pecuniary consideration likely to be derived therefrom. And having noted down during our rambles such facts in relation to natural history as appeared to possess interest, we now cull from these notes the substance of such observations as were made on the vegetable productions and their localities;

confining ourselves for the present to what was observed in the vicinity of Rio de Janeiro, and within sixty miles inland of it, in an easterly direction. And, Mr. Editor, it is not at all unlikely that much that may be said on the above head will prove of little interest to many of the readers of the Florist. Be this as it may, we are inclined to believe, that to the practical horticulturist, or such as have the cultivation of plants from this and similar tropical regions to attend to, some hints may perhaps be thrown out by the way, which in the daily operations of the judicious cultivator, it is possible may prove of some advantage to him.

One of the first features of this rich and beautiful country which presents itself to the eye of a lover of nature on entering the spacious bay of Rio, is the conical hills on each side, and beautiful islands clothed with luxuriant vegetation down to the water's edge. Passing these, and advancing towards the city, the scene becomes grander and more extended, the objects being more distant and of greater magnitude. On the left, its base laved by the surf, is the symmetrical *Sugar-loaf* rock, 1250 feet high; and some few miles distant in the back ground of this, the Corcovado, with its bald top, rises to an elevation of 2230 feet, whose irregularly sloping sides are covered with the richest of Flora's productions—of which we may speak hereafter. To the eastward, and at a distance of — miles, are seen the Organ mountains; the points of some of whose peaks rise to the height of 7000 feet. These mountains, which can easily be reached in two days from Rio, will more amply repay the botanist for his trouble of visiting them than any other region of the same extent with which we are acquainted. On our first excursion to them, we took passage on board of a felucca-rigged freight boat; and being favored with a steady and rather *stiff breeze*, we found ourselves glided along by far too swiftly to be able to distinguish the individual rarities that adorn the numerous islands which stud the surface of the upper part of the bay. After about two hours' sail we found ourselves entering the mouth of the Rio Anhumirum, the water of which was muddy and sluggish, flowing as it does for a considerable distance through a marshy district. The banks on each side were low; along these grew *Anona palustris*, and a shrubby species of *Hibiscus*, bearing yellow flowers. *Acrostichum dancaefolium*, Langsd. and Fisch., with its golden colored frond six to eight feet high, occupied large tracts, almost to the entire exclusion of other plants, although occasionally a few *Cyperaceæ* and the spikes of a species of *Typha* shewed themselves; in mud creeks a *Pancratium*, with large white flowers, grew in masses, while from the boat we picked up floating along tufts of *Salvinia natans* and *biloba*, with *Pontederia crassipes*, *Limncharis Humboldtii* and *Azolla majellanica*. We landed from the boat at a village called Estrella; from this the distance to the base of the mountains is about eight miles by the public road, which

passes over a gently undulated, sparsely wooded country. Here by the way side we saw for the first time some beautiful species of *Loranthus*, parasitical on trees, some bearing scarlet, and others yellow flowers. Many of these *Loranthus*, and particularly the scarlet flowering kinds, attain to a great size, their heads frequently 4 and 5 feet in diameter, and are equally as graceful in their growth and pretty in their blossoms as many of our finest *Fuchsias*; the most of the yellow-flowered ones partake more of the habit and possess as little beauty as our native *Mistletoe*. But we must not linger on the road, for there are many gems found in the valleys and tops of the mountains to be talked over.

Just imagine yourself, kind readers—you who are lovers of nature and landscape scenery—standing upon one of the peaks of the Organ mountains, at an elevation of six or seven thousand feet, overlooking the spacious Bay of Rio and its numerous islands, with clusters of ships of almost every nation lying at anchor, the largest of them appearing not bigger than the canoe of an Indian, while more near on the flat lands surrounding the water, plantations of Cocanut trees, Plantains, Bananas, Sugar, Coffee and Mandioca (*Jatropha manihot*), with Rice fields of a lively green, somewhat relieving the eye after passing from the gloomy, deeply-wooded declivities of the mountain sides, and the rugged granite rocks shewing their crests here and there high above the trees.

On entering the margin of these evergreen virgin forests (mato virgin) we felt quite at a loss to know what plant to collect first, so numerous were the species of the various tribes of *Begoniaceæ*, *Rubiaceæ*, *Solanææ*, *Apocynaceæ*, *Urticaceæ*, &c., &c., which met the eye. Among the genera, *Begonia* was most conspicuous, containing many species which it would be very desirable to have in our greenhouses; seldom two plants of the same species are found growing side by side—unlike in this particular, in a general sense, the vegetation of northern countries, where species are usually more local and social. These remarks apply exclusively to the distribution of species in this portion of Brazil, for in some districts in the interior plants are found more in groups or masses. Another very striking peculiarity of the trees and shrubs in this region consists in the thinness of their bark, in proportion to the size of their trunks, and that the outer rind is not thrown off, as is the case with most trees indigenous to northern countries and New Holland.

From the circumstance that these Brazilian forests are always dripping with moisture, and the great abundance of decomposed vegetable matter, ferns are very numerous and lovely; the tree kinds belonging to the genera *Alsophila* and *Cyathea*, with trunks 30 or 40 feet high, and tops of grace-

ful spreading fronds, together with several species of pinnated-leaved Palms, reflect a sort of gayness over the gloom thrown around you by the dense foliage overhead, the chattering of monkeys and the screeching of parrots. To ascend one of these forest trees is no easy task; we were often induced to make the experiment in order to procure some pretty Orchid, Tillandsia, Fern or creeper, which clustered its blossoms aloft on the boughs; but the trunks being very high, smooth and wet, with few branches making off till near the top, which we confess we seldom were able to reach. With respect to what those large forest trees are, very little is yet known by botanists, but from some of their flowers which we picked up on the ground, we made out more than one species of Bombax; others belonged to the genera Cassia, Bignonia, Lecythis, Melastoma, Inga, and Cæsalpinia. It is also very difficult to fall with the axe individual trees from which to procure specimens, their heads being so interlocked with each other, and bound together with roots and stems of climbing plants, belonging principally to the genera Echites, Cissus and Bignonia; the roots and stems of these twine round their trunks and hang down from their tops, resembling somewhat the rigging of a ship.

We have said that some pretty Orchids were to be found on these trees, but we would have it here understood, that in dense shady forests the Epiphytal kinds are by no means numerous, and only solitary specimens of terrestrial individuals of this family are here met with. The favorite localities for this beautiful tribe is on exposed rocks and the margins of openings in the forests, but more particularly along the banks of rivers and streams, where the Epiphytal kinds may be seen in clusters like crow nests, attached to the limbs of trees, where the plants have a free circulation of air and a liberal supply of light, and even sunshine—the stems, with their singular and insect-looking flowers waving to and fro in the air by the winds. We feel satisfied that the majority of individuals who cultivate Orchids are guilty of a palpable error in their indiscriminate manner of treatment. A densely shaded glass house, or corner of one, the atmosphere surcharged with moisture, and a high temperature kept up, is too often the receptacle for such plants; and we may be permitted here to hint how mother Nature (and she is never at fault) manages such things in Brazil. In the first place, all those species with thick coriaceous leaves, (and to this class belongs some of the finest of the family) she places on trunks and limbs of trees, or on rocks where light and air is freely admitted and water cannot lodge about the roots. We have often seen patches of these kinds on the wet ground in the forests, where they had been blown down by the winds, yet we never saw any that had been long in this position but what appeared sickly and in a decaying condition, from only having been removed a few feet from their

original or primitive position. But what we deem in cultivation as essential to the well-being of this class is, that after the plants are placed in proper receivers, they be suspended from the roof of the house, or placed in a position where they will be surrounded by a moderately humid pure atmosphere, and very slightly shaded.

As somewhat pertinent to what has just been stated above, we would mention that by far the greatest number of Epiphytal Orchid plants—and at the same time the most beautiful that we ever met with in any one spot—existed in a swamp about two acres in extent, and thinly wooded with low trees of a species of *Anona*; on these grew innumerable patches of a lovely species of *Lælia*, bearing large violet-colored flowers; also, an *Oncidium*, with deep yellow flowers. Through the quagmire, somewhat over the knees in mud and water we waded, in order to enjoy and examine these beauties; and we found that from the effects of a powerful sun acting on the shallow water, a rapid evaporation was going on, which had had the effect of attracting the roots of the Orchids to leave the bark of the trees and spread out in all directions.

In the second place, those Orchids having membranaceous and ribbed leaves as a general rule inhabit thickets of bushes and forests, where they are shaded, and either grow on the ground or in clefts of trees where vegetable matter accumulates; these require more moisture than the first class, and are better constituted to succeed under the treatment that is usually meted out to the entire tribe by cultivators. We are inclined to believe that the number of species belonging to this section are greater than the first, though in general not so beautiful or interesting.

Inhabiting trees and rocks, requiring similar treatment with that of Epiphytal Orchids, is the genus *Tillandsia*, of which a great number of species is to be found in Brazil, nearly all of them producing greenish-yellow flowers; but the great beauty of individual species is to be found in their colored bracts, many being crimson, others yellow, and some blue; and we are rather astonished that some of the finer kinds have not already been introduced into our collections, as they are readily procured, stand transportation well, and are easily cultivated.

To gain the summit of one of the higher peaks of the Organ mountains, the traveller must subject himself to a considerable amount of physical exertion. Where the forest trees are the largest and standing close together, the travel is comparatively easy to what it is on nearing the top, where openings in the forest occur; such places are often strewn with prostrate decaying trunks and branches of trees, overgrown with masses of a small species of bamboo, ferns, and prickly vines, through which you have to grope and cut your way. In these openings, and in rents of rocks which tower

above the trees, many choice plants are to be found of the following genera: Gesnera, Vellozia, Hippeastrum, Sinningia, Besleria, Columnea, Gaultheria, Clusea, Rhipsalis, Cactus, Prepusa, Escallonia, Luxemburgia, Tillandsia, Franciscea hydrangæformis, with numerous Orchids, and a composite plant with flowers like a Stiffia.

The country for thirty miles beyond the Organ Mountains, through which the main road to the Minas Geraes passes, is of a rolling or hilly character and densely wooded. Off and on this road, which keeps close to the banks of the Rio Parahiba, we botanized for a few days; a view from an eminence of the tops of the forest trees here was truly beautiful, so many of them being in bloom. The *Cæsalpinia brasiliensis* (Brazil wood,) was very common and conspicuous, its top covered with yellow flowers, dotting the forest in every direction you might turn; these, with the hoary-headed, broad-leaved *Cecropia peltata* and *digitata*, contrasted well with *Jacaranda mimosæfolia*, and numerous *Melastomæ* bearing violet-colored flowers; for in Brazil many species of this family form trees twenty to eighty feet in height, and when in bloom are marked objects of attraction. By the sides of the roads where the primitive growth had been partially cleared away, an entirely distinct flora had sprung up in its place, consisting principally of Solanaceous plants and compositæ of luxuriant growth and great beauty of flower, intermingled with *Begonias*, *Lobelias*, *Prepusas*, and rambling Apocynaceous and Malpighiaceae plants, such as *Banisteria* and *Stigmaphyllon*, with solitary specimens of a *Bougainvillea*, and an *Alstræmeria*, like *A. acutifolia*; and on moist ground some fine scarlet and blue *Lobelias*, one of the latter with a stem ten feet high, crowned with very ornamental flowers. Along the margins of sandy creeks grew several species of *Cleome* and quite a variety of *Lantanas*, over the tops of which rambled the stems of *Aristolochia brasiliensis*; and close along and on each side of the road a row of *Furcroya gigantea* had been thickly planted in order to prevent the mules returning from the mines with their loads getting lost in the bushes. We passed for miles between such rows of this most majestic of all herbaceous plants, a number being in full bloom at the time; some of the flower stems at the base measured eight inches in diameter, and stood from thirty to forty feet high.

There grew on low lands that had been inundated by the river, two species of *Cuphea*, both very desirable for cultivation, one having deep purple, and the other pale blue flowers; while a yellow flowered *Jussiaea* in large masses occupied stagnant pools of water. We had now got far enough inland to find the stately *Araucaria brasiliensis*, not in groups or groves, but in solitary specimens on the banks sloping to the river; their symmetrical habit and lance leaves closely set on the branches, contrasted strongly with the broad, smooth, shining foliage of the umbrageous trees on the back ground. One of these *Araucaria* trees we ascended in order to procure

some of its cones, which like many other good things that had presented themselves on this excursion—were very difficult to be got at, but by swinging ourselves like monkeys from one branch to another, we succeeded in procuring all that was wanted; the largest cone being about the size of a 6lb Pine apple, and the height of the largest tree we saw, did not exceed 70 feet.

On the top of the hills in this district is found *Euterpe edulis*, the Cabbage palm of Brazil, and we can from experience say that it is a good substitute for the cabbage itself; the young, unexpanded, blanched leaves which form the centre of the plant is the part taken for use, and the cut is made so deep into the core of the tree, that it never afterwards recovers.

A large native Fig tree, whose broad, spreading top when measured, was found to be 140 feet in diameter, luxuriated in the midst of a small village through which we passed, the lower branches were about 6 feet from the ground and extended out their whole length horizontally; but unlike the Banyan-tree of the East Indies, no roots were thrown downwards to the earth; to these lower branches clung four species of *Tillandsia*.

Two tribes of herbaceous plants which give character to Brazilian vegetation, are *Araceæ* and *Scitamineæ*; the first is represented by the genus *Pothos*, mostly all of the species of which have creeping rootstocks, these ascend trees; and ramble over moist rocks; with *Colocasia* and *Caladium*, both inhabiting wet places. *Scitamineæ* is represented most largely by species of the genera *Alpinia*, *Hedychium*, *Globba*, *Canna* and *Heliconia*: the three first are usually found inhabiting rich alluvial spots by the banks of streams; the species of *Canna* are commonly found on the outskirts of cultivated grounds, while *Heliconia*—which to our idea is the most ornamental of the whole tribe, is an inhabitant of mountain forests.

The tribe of Grasses as might be expected, is but sparsely represented in a country so densely wooded, but a few of those present were of the most majestic kinds; in some localities situated in the bosom of the mountains where the soil was deep and rich, patches of bamboos were seen, whose smooth, round, shining canes rose to the height of 60 to 100 feet, and from 3 to 4 inches in diameter at base.

With regard to ferns we shall not at present say much; nevertheless, that they were found to be numerous, though, perhaps less so than in the vicinity of Rio, in comparison with the number of flowering plants, and shall only note in succession the genera which we supposed to be most largely represented in species; first—*Polypodium*, *Asplenium*, *Pteris*, *Acrostichum*, *Aspidium*, *Adiantum*, *Hymenophyllum*, *Lycopodium*, *Gleichenia*, *Lygodium* and *Anemia*; with solitary specimens of such interesting genera as *Marattia*, *Danaea*, *Cyathea* and *Alsophila*. In one locality we met with that rare and beautiful fern *Salpiehlæna volubilis*, I. Sm., (*Blechnum volubile*, Kaulf.,) climbing on trees to the height of 40 feet.

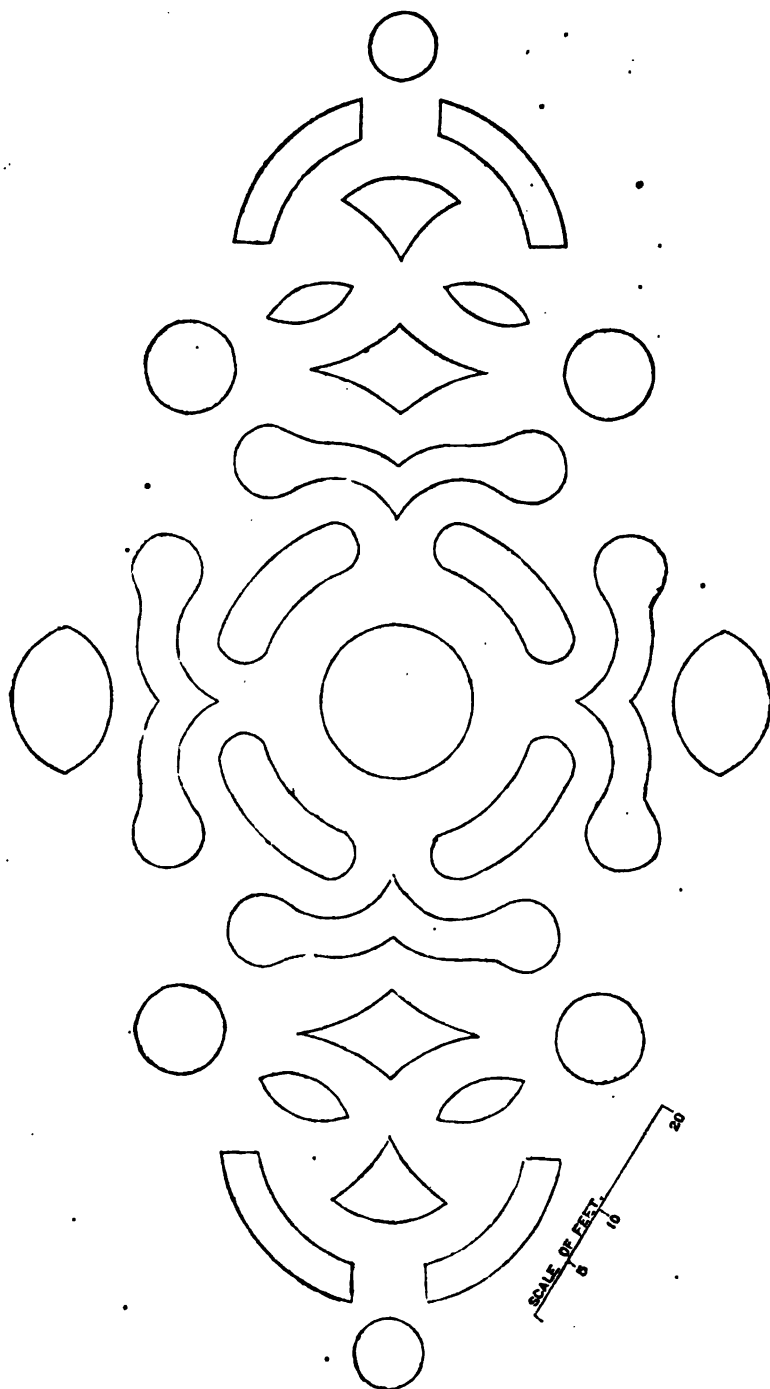
The soil of the greater portion of the region, the vegetation of which we have given the reader a faint idea, consists principally of a tenaceous red clay; but from the mild heat and great quantity of rain that falls, vegetation is very rank, and decomposition of the parts thrown off is constantly going on, so that a vast accumulation of vegetable earth prevails all through the forests, affording food for plants of all kinds.

At some future time we may say something of the natural and cultivated vegetation in the vicinity of Rio. PEREGRINUS.

FLOWER GARDENS.

Geometrical flower gardens when properly located and tastefully arranged are always inviting. Objection has frequently been urged against this species of garden as being of too artificial a character for introducing into natural scenery, but I apprehend that all such objections may arise from the misapplication of the principle. Artificial rockeries, lakes, and all other miniature representations of natural scenery require much taste both in their immediate formation, and the suitability of the locality in which they are placed. So with the geometrical flower garden. In pleasure grounds of an undulating nature, traversed by serpentine and abruptly curved walks, irregular masses of shrubbery and broad patches of flowers will seem more appropriately decorative, than any formal arrangement of straight lined or circular shaped beds. Nothing can be more out of character than laying down one of these gardens on an extensive lawn, or open pleasure grounds. Equally objectionable is that system of dotting lawns indiscriminately with flower beds and trees, as unmeaning as out of place. Many fine pleasure grounds are rendered tame and uninteresting from the ineffective sameness thus produced.

These designs are very effective in retired situations, hemmed in by trees and shrubs, more especially when surrounded with an elevated terrace walk, that it may be comprehended in one view. Perhaps their most appropriate position is within, or rather, placed so as to grow an extension to, the architectural boundary of the house. Here they can be viewed from the windows of the dwelling, and may be decorated with vases, sundials, and other appropriate architectural devices. The flower beds are either intersected by gravelled walks, or cut out of the grass. The accompanying woodcut is intended to illustrate the general character of those surrounded with grass. With regard to the planting of these spots, there is much room for artistic skill and taste. The modern system is to fill each bed with a distinct colored flower, contrasting the colors so as to produce a striking effect when viewed as a whole. Notwithstanding that this arrangement of contrasting colors is very frequently attempted, I have met



with few instances where it has been successfully carried out. A thorough knowledge of the composition of colors, is an indispensable pre-requisite.

The plants usually employed for producing masses of flowers are tender, consequently they are useful for a few months only. It is desirable therefore to plant a few beds permanently with dwarf evergreens. The Evergreen Berberries are well adapted, beautiful in foliage, flower, and fruit. The *Euonymus* also forms a fine mass, can be pruned into any shape. *Kalmias*, and *Rhododendrons*, will also be available. Deciduous *Azaleas* should be introduced. The varieties of *Yucca*, planted singly in the centre of the beds would have a fine effect, so exotic in appearance. *Aucuba japonica* will produce a beautiful variegated bed; in this way the flower garden may be rendered cheerful even in winter.

As already observed, much depends upon the selection of suitable plants for a dazzling display of flowers during summer. There is nothing superior to the numerous varieties of *Verbena*, they continue in splendor under the brightest sun. *Petunias* also flourish well in dry weather. The soil should be well deepened in the first place, and moderately enriched. This will save much labor in watering; an expedient often resulting from inefficient preparation. The beds should not be elevated in the centre, as is often done, a level surface is preferable, and retains moisture longer. Instead of filling each bed exclusively with one variety, a better effect is produced from a mixture; for instance, *Verbenas* form an unequalled display of flowers, but are deficient in height and foliage. *Heliotropes* make robust growths, attain the size of small shrubs, but are wanting in brilliant colors; the two planted together, the latter in the centre, form a desirable combination. So also with *Petunias* and *Salvias*, *Geraniums*, *Penstemons*, *Portulacca*, *Nierembergia*, &c. Examples might be multiplied, but it is not necessary. Many modifications and alterations will occur in practice, always keeping in view the completion of a pre-conceived design, both in arrangement and choice of plants.

Baltimore, February, 1853.

WILLIAM SAUNDERS.

BOTANICAL VARIATION IN A NECTARINE FLOWER.—MR. EDITOR:—I send for your inspection, a flower of a *Pitmaston* nectarine, having two perfect pistils. It is another instance of the uncertainty of botanical characters when the plants from which they are derived are under cultivation. At some future time I shall have some similar observations to record on the strawberry—tending to show, that the distinctions so much relied on by our friends in the great West, with regard to Staminate, Pistillate, and Hermaphrodites, are perfectly arbitrary—that a staminate can be changed to a pistillate, &c. entirely by cultivation.

THOMAS MEEHAN.

For the Florist and Horticultural Journal.

ON THE CULTURE OF THE ERICA.

There are upwards of seven hundred species and varieties of the Erica, and if any tribe of plants requires the special care of the gardener, if any more beautiful than another, it is the Erica. The Ericas (except a few species) are found on the Table Mountain, at the Cape of Good Hope, 3600 feet above the sea, in latitude $34^{\circ} 28''$ south, which is a hot and airy situation, and proves that the Erica can without injury, bear intense sun on the foliage, but not the destructive effects of the sun's rays beating on the pot. To propagate the Erica by seed, I prepare a cold frame, in size according to the quantity of seed; the soil I use is turfy sandy loam from an old pasture, I fill the frame to about a foot from the glass, and press firm and evenly down to sow the seed on, which should be in rows, with each sort labelled; cover lightly with fine soil, then syringe the bed over, to settle the soil, and keep the sash in until they vegetate; if sown in March they will be fit to pot in the end of summer or beginning of autumn singly into thumb pots. After potting, place them in a close frame for a few days and gradually harden them off; at the approach of frost shift them into the greenhouse or heathry, near the glass, in a situation where they are exposed to the genial influence of the sun and capable of free ventilation at all times. To propagate by cuttings is nearly as sure as raising from seed, and they mostly make stronger plants. In preparing for the cuttings, I take a square box 4 or 5 inches deep, I put sufficient drainage in the bottom and fill up with sand and loam well mixed, and cover with about $\frac{1}{2}$ inch of white sand, and press gently down so as to allow for the top of the cutting to be $\frac{1}{2}$ an inch below the edge of the box; then lay a square of glass over the box, which may be turned once or twice a day, and is much quicker than wiping out bell glasses. Cuttings may be put in at all seasons of the year, the most preferable months are January, February and March. Having all ready for the cuttings, I select shoots which, on cutting at a right angle under a joint or set of leaves, will not be bruised, but cut clean through, which is a good criterion to judge from; dress the leaves

off for two or three joints with a very sharp knife; the cuttings should be put in rows and have each sort labelled; a gentle watering is necessary to settle the sand. I place them in a cool part of the greenhouse, as they should not be excited at first, as they are apt to damp off or grow up weak; when they are calloused they may be moved to a partly spent hotbed with a gentle bottom heat; when too much heat is applied the cutting is elongated, to the injury of its rooting; they should be potted off as they root in half turfy loam, half peat and sand rubbed through the hands, but retain all the vegetable matter in the soil; treat them the same as the seedlings after they are potted.

In the spring following their seedling or cutting states, when they are too large for thumb pots, I shift into 3-inch pots well drained, and keep the ball about half an inch below the edge of the pot, so as it will hold water to wet all the soil in the pot at once; I then plunge in a cold frame in a partly shaded situation, and keep the sash on during storms, as they should not be exposed to the weather when so young, and plants in pots suffer more than when planted out; when the nights get frosty I give them the same treatment, as they had the winter before in the seedling and cutting states. In the season following, when the frosty nights are over, I prepare a bed 18 inches deep, with good turfy loam from an old pasture, well chopped up; if not of a sandy nature I make it so. I then select one or two duplicates of each species; I do not expose too many of the rare and tender sorts to the heavy rains; I plant in rows 2 ft. apart; these by the following autumn will have grown fine bushy plants, when I have them carefully taken up with balls according to the size of the plants, and put in pots larger than the balls, to allow them to grow, as they should not have their growth retarded at this period, and I take great care not to cramp the roots, as nothing injures plants more than to force them into small pots. I then place them in a cold frame shaded for a week or more, and syringe them overhead occasionally, and gradually expose them to the rays of the sun. *Ericas* which I grow in pots, when the roots become matted round the side of the pot, I repot into 2-3 of turfy loam 1-3 of white sand, charcoal, and pieces of broken freestone, or any rough material to keep the soil from becoming sodden; and the roughness of

the compost should be according to the age and size of the plant. I make a practice to have the pot well drained with charcoal, crocks, &c., if not, the soil becomes soured, and premature death is the result.

With the above treatment I have grown *Ericas* complete; bushes in three and four years from 1 to 2 feet diameter, from 9 to 18 inches high; and sorts such as *Persoluta*, *Transparens*, *Politrichifolia*, &c. Much larger *Ericas* should be repotted some time before they are exposed to the influence of the weather, and if not plunged in the ground they should be put within a larger pot, and the intervening space filled with moss, which retains moisture and prevents the injurious effects of a hot sun beating on the roots; when the plants are in a growing state they should be frequently stopped, and pegged down on the edge of the pot, which gives them a bushy appearance, as nothing looks so unsightly as sticks and props, (which Glen-ny calls the minor frigate of war style.) There has been much cavilling as to the soil *Ericas* should be grown in; the soil I succeed best with is turfy sandy loam, which has been flayed from an old pasture to the depth of two inches and piled in a heap until it is well decayed; I find that *Ericas* grown in peat receive more injury from the hot sun than when grown in loam; the cause may be from not having turfy fibrous peat, as the peat that is generally used is got from swamps or wet, shady woods, and is in a sodden state to begin with. To have *Ericas* root freely, the soil must be a free soil and not a binding one, and the color is no object; *Ericas* should never be watered when the hot sun is beating on them, (especially if in a growing state) or they are apt to droop and die. In summer they may want water once or twice a day, in winter sometimes once a week; when the ball gets matted hard, I take a sharp stick and perforate the ball from the top, which allows the water to sink all thro', as sometimes when they are repotted the water sinks through the new soil by the side of the pot, and the ball is quite dry. *I never give a little water, or water sparingly*—I always give sufficient to wet the whole of the soil in the pot at once, and never water but when they are becoming dry. I believe there is more injury done to the plants by injudicious watering than all other evils connected.

The best structure for *Ericas* is a low span-roof house about 13

feet wide inside, the sections being north and south; height 6 to 8 feet, length 60 to 100 feet, so made that the glass could be taken off in summer; or in short, a span-roof hotbed, or frame, heated with hot water pipes; smoke flues should never be put in a house for growing *Ericas*; one-half of the house should have borders prepared for planting them out of the pots for three or four years, where they could have time to grow to specimens; and the other half for plunging the plants in pots. If they are kept in a greenhouse they should be arranged on the front shelf where they can have plenty of light and air when weather permits; the thermometer may range from 40 to 45 degs. Fahr. or not below 35 in winter, and 45 to 55 or 60, with sun heat in the early spring months; if the house is kept too close and hot, they are apt to mildew; if there be any appearance of mildew, syringe with sulphur water, which will stop it. Syringings may be given on clear sunny mornings in winter and in the evenings in spring and summer, which keep them clear of scale and filth, and contribute greatly to the health and vigor of the plant.

WM. GREY, *Kenwood, Albany.*

For the Florist and Horticultural Journal.

ORIGIN OF THE CHOROZEMA,

WITH RÉCOLLECTIONS OF GARDEN SCENERY.

Among the many beautiful additions which New Holland has afforded to our greenhouses, few perhaps are more interesting than the Choroze^ma, whether we consider the beauty of its bloom or its entertaining history.—The derivation of its name from *choros*, a dance, and *zema*, a drink, alludes to the occasion of its discovery, which was made by a party in search of fresh water, and which they found at the same time. Among my earliest recollections I recall an elegant specimen of *C. varium nanum*, which stood 3½ ft. high and as many across, never failing in the vernal months to cover every inch of its surface with racemes of its fine showy blossoms. This reference leads me to the beautiful place where this specimen grows; and I hope that a brief detail of its other beauties will not be uninteresting. Lismore Castle gardens, owned by the Duke of Devonshire, which are under the superintendence of one of his best gardeners, Mr. Keane, who has managed them for the last 25 years with the greatest credit. Here he cultivates upwards

of 150 varieties of that noble family, the *Erica*, which are exclusively grown in peat with a small mixture of turfy loam; he also uses liberally peat charcoal and white sand. I have never since seen any collection superior in luxuriance of growth or of bloom. The peat is obtained from that part of the mountain where the heath grows, and the sods are piled in a heap for twelve months before using.

A few of the varieties which I most admired were *Hartnellii*, which produces a profusion of red flowers, and possesses the property of blooming twice a year; *Archeriana*, which I never saw at any time lack its dozens of beautiful scarlet clusters; *Propendens*, a highly esteemed favorite, bearing in spring its fragrant purple bells in great profusion—one called *hybrida*, with tubular glistening red blossoms, deserves especial notice; *Westphalingia*, bright crimson,—most of the *ventricosas*; *Bothwelliana*, the best specimen I have ever seen, its flowers resembling *ven. grandiflora*; *Cavendishii* and *depressa*, *splendens*, *ampullacea superba*; *Masonii*, *perspicua nana*; *triumphans*, *Shannonii*, and almost endless variety of fine sorts. In a visit which I lately paid to the nursery of Mr. Menand, I was much gratified by the healthy appearance of his fine young specimens of this family, which are the foundation, I don't doubt, of something astonishing—even so much as Chiswick specimens.

Both the kitchen and flower gardens at Lismore are remarkable for their tasteful and peculiar construction, with winding walks and lofty trees; and well worthy of notice is the "*dark walk*," so called from the fact that the brightest rays of the sun cannot penetrate the densely leaved arcade of Yew trees, the growth of centuries.

Along the south walls in the pleasure grounds are planted all the fine varieties of tea and china roses, besides a large collection of beautiful climbers, such as *Clianthus puniceus* and *Glycine sinensis*; some fine *Magnolias*, the finest Coral tree I ever saw, two extraordinary *Yuccas*, var. *gloriosa*, which recently threw up spikes of flowers 17 feet from the ground. An *Acacia affinis* stands 30 feet high, an *Araucaria imbricata* not less than 12 ft. high. I once had the pleasure of showing a gentleman from New York around this establishment, and many times did he sigh for some such places in America, and so do I—but as the inclemency of our winters wont permit such rarities to live out of doors, let our gentlemen of sufficient means imitate my employer, in the erection of glass, and then we can have the pleasure of their beautiful appearance. Let our ladies also warmly advocate the cause, as it is only a natural circumstance that the gentlemen should listen to their solicitations, and thereby evince that zeal which no tasteful mind should lack.

MAURICE WALSH,
gr. to E. Corning, Jr. Esq., Albany.

MR. EDITOR:—Your correspondent "Anthophilus" seems to have found a "mare's nest" in the fact that plants can be grown without peat. Indeed, he actually believes it. It would be a greater wonder to me to see plants, of the kind he mentions, grow well in it, if the peat he alludes to is the *marsh mud* that I see some gardeners collecting, drying, and storing *past* under that name. One thing I wonder much at is, that I never see any of them using it by itself in their plant culture;—perhaps they would grow *too* well. Traddles thinks they would not grow at all in it; but *he* is no authority. I would hesitate in making the remark, did I not see encouragement *looming* through some late articles in your pages. That I have known heaths on the tables at Chiswick with very little peat about their roots, not more than a "night-cap" full to the bushel. This was merely tried as an experiment, not from a scarcity of good peat—real fibry stuff, fit for foot balls—that had to be cut with a chopping-knife before it could be used.

I had hoped that the mysticism of compost making was at an end; but in a late "New York Agricultor" I observed a specimen which, a century ago, would have immortalized the author. It is a border for growing grape vines, composed as follows—I omit the quantities of each, which are considerable: Bones, skulls of sheep and oxen, pulverised charcoal, oyster shells, leather scrapings, coal ashes, blacksmiths' cinders, leached ashes, iron filings, well-decomposed manure, street scrapings, garden soil, yellow loam and sod. The writer premises that he is "very particular with his border," and "waters with soapsuds every Monday—one pailful to a root—and on Friday with guano." If this is not horticultural charlatanry it is a very near approach to it. Such exposures go farther in retarding than advancing the subject they pretend to simplify. Many who would gladly undertake the culture of grapes would give it up in despair, if they seriously believed such a conglomeration of substances was indispensable for their growth. Your calendar writer may snuff out his farthing candle in the face of this bright light. He is content with well drained "garden soil," trenched two feet deep, and mixed with charcoal and bones. The latter substance is very generally recommended as a manure for grasses. Wonder if the idea was taken from Plutarch? He informs us that "the Massalians walled in their vineyards with the bones of their enemies that they had slain, and they produced a prodigious crop the next season." Truly, "there is nothing new under the sun." This was some 2000 years ago.

You remark that the London Horticultural Society have been trying sulphur and lime to prevent mildew, and think it will do it. They need not *think* anything about it, its efficacy has been fully established long ago. As like as not they picked up the remedy from Allen's treatise on the vine, published some years ago in Boston; but, of course, *they* must find it out for

themselves. The *discovery* has also lately been made in France.

“A curious coincidence, to use a phrase,
By which such things are settled now-a-days.”

There it gets the name of hydrosulphate of lime. Brandy and water, with a squeeze of lemon in it, in these gentlemen's hands would become the acidulated hydrate of alcohol.

This sulphur and lime mixture is also valuable as a means of eradicating red spider; applied as a whitewash on the underside of the stage during summer, and every part of the greenhouse where the color is not objectionable, red spider will not make their appearance. If they are troublesome in winter, paint a little of the mixture on the flues or hot water pipes, if that method of heating be adopted. In this way a slight application will be sufficient—otherwise it may injure the plants if a strong heat be applied.

ANTI-HUMBUG.

MR. EDITOR:—In reading the commencement of the article on Heaths by Mr. Saunders, I said to myself, at last here is one with whom I can agree—“Heaths can be grown without peat,” and “in a mixed collection of plants;” but when I came to the conclusion of the article, I saw that I was mistaken: that in fact the sarcasms of “Anthophilus” about artesian wells and ice houses are more near to “Experiment” than to me. Is it possible that such a practitioner as Mr. S. should advocate such means to grow such plants as Heaths? I could conceive such associations for *Cypripedia*, for *Calopogon pulchellus*, *Arethuse*, &c., but for Heaths, natives of the most southern parts of Africa, and for the most part growing on dry, dreary hills, at an elevation of many hundred, perhaps thousand feet above the sea level! I know you will say that the atmospheric circumstances are different. I know they are, as from a dry hill to almost a cistern. Do we lose our Heaths in summer in the driest seasons and weather? No! it almost invariably happens after a shower—and the heavier and longer the rains, the greater the chance of losing them. Perhaps you answer—we can cover them to keep off these rains; then I will ask you, if those who have adopted the system of keeping them in doors all the time have had better success, and have never lost any? If so, where are they? The best collection I have seen in America was in Boston, at the Hon. Mr. Wilder's; they stood in the middle of the garden, exposed to all atmospheric changes, and yet were in the best condition I should ever wish plants to be. There were not only Heaths, but *Epacridae*, *Lysinema pulchellum*, and *L. pungens*, plants still easier to lose than *Ericas*—and all more thrifty than I ever saw them. I have now in bloom *Dracophyllum Hugelii*,

another *Epacridea*, which stood all last summer fully exposed to the sun, in a 4-inch pot, and not plunged, but standing above ground. However I don't recommend the plan, I only quote the example.

It is really astonishing to see how contradictory are our opinions about these unfortunate plants; they are natives of one of the driest and warmest parts of the globe, and we want to make them live in the most frigid atmosphere. Ah! Mr. Editor, we are not homœopathic doctors in our treatment of plants—it is surprising how Heliophoby is prevalent among gardeners—shade, shade for everything; shade for *Orchideæ*, shade for *Heaths*, and of course, shade for ourselves; but I think we keep ourselves too much in the shade—the reason why our ideas become so *etiolated*, so diverse, so weak. Ah! my friends, instead of complaining that the sun is made too hot, let us rather regret that our minds are too narrow for the portion of vanity which occupies our brains; nothing is wrong but our presumption. What, we style ourselves physiologists, phytologists, naturalists, &c., and we want to explain all the phenomena of nature? yet we cannot make use of the very small allowance of common sense with which the Supreme Being has endowed us.

L. M., Albany, Mar. 1.

MR. EDITOR:—I'm in for it, to a certainty—simply for giving my opinion on a few bricks in a “north-east aspect,” to grow my little pets, the *Ericas*, in. I am very sorry that our friend “*Anthophilus*” has such tall ideas—he certainly must be a tall man if he cannot stoop to look into those miniature holes six or eight inches from the ground; but he must consider that we working gardeners of Philadelphia are glad to bend our backs to poke our nose through the holes he talks of, to gaze upon our little notions,—and in time we hope to get larger notions.

“*Anthophilus*” seems to want to make large Chiswick specimens at once; I do not. My four brick walls in a north-east aspect, I can convince him, is the right place to grow them in. The space I allotted is small, but what use is there of a large place with no *Heaths* in it; but I know that the Chiswick specimens will come out of such a place, and Philadelphia is to be the Chiswick of America. You shall see.

EXPERIMENT.

We think that the views of our different correspondents on this subject have been pretty well stated by this time; and we want to see the result of their practices. There are many persons of experience here who still doubt whether they can be grown at all, and the only way to satisfy all parties is to show plants of the fine kinds—not *Mediterranea*, nor *Wilmoreaana*, nor *Rubida*, but such as are more difficult, as *Neillii*, *ventricosa superba*, *ampulla-*

cea, Rollinsonii, &c. It matters very little whether they are grown in the shade or in the sun, so that we have them. The opinion of the writer is decidedly with those who do not think peat essential to growth of certain kinds of plants.—ED.

To the Editor of the Philadelphia Florist.

DEAR SIR:—You have heard of the Augusta Rose that is about Syracuse, N. Y., and has been talked about and written upon for the past two years, with a more mysterious air upon it than any other Rose of any other name, always closing with its being the finest yellow ever-blooming Rose in existence. We think in all candor that the mystery should be unveiled, and the fair proportions of the Rose laid before you, presuming as you are not one of the trade you will give it an insertion.

The seed of the Rose was obtained from some of the roses that luxuriate in the gardens of Washington City some years ago. The result has been the said Augusta Rose, which appears to be in character between Noisette Sol-fatare and Cloth of Gold, an improvement on the former, but (what we have seen) inferior in color and nobleness of flower and petal to the latter. It does, however, possess the character of blooming freely, even on very young plants. In hardiness we would assume it to rank with Solfatare, or Noisette Lamarque, and more fragrant than either of those two roses, and perhaps equal to them in growth.

Yours, a lover of

ROSES.

NEW AND RARE PLANTS,

FLOWERED FOR THE FIRST TIME THIS SEASON, AT SPRINGBROOK.

No. IV.

EPACRIS MINIATUS—Perhaps the best of the dark flowered kinds. Its flowers have the rich bicolor of the *E. grandiflora*, but with twice their thickness, with the finer habit of *E. impressa*. It may be an hybrid between the two. My plant is but small, being but a rooted cutting when received from Messrs. Hovey last spring. Its flowering so young indicates a free blooming property, which the plant recently introduced and exhibited at the last meeting of the Penn. Hort. Society by Mr. Buist confirms.

TROPÆOLUM AZUREUM.—We received a small bulb of this last spring from Mr. Buist. It was kept in a 3-inch pot of sandy loam, dry, on a shelf in the greenhouse till October, when it showed signs of growth. This small pot

was then plunged to the rim in an 8-inch pot, and the plant trained to a flat trellis. It has been a sheet of blue for the last two months. The foliage is small like *T. tricolorum*; the flowers are large, its petals more spreading. It is essential in a collection of Tropæolums.

ERIOSTEMON BUXIFOLIUS.—Who that has seen an European collection of Cape or Australian plants, does not know this, *there*, old and beautiful plant? I should think that it must have been formerly introduced into our collections. Our plant was introduced last fall by Mr. Cope, from Messrs. Lee, of London. Though the waxy white flowers are not so pretty individually as some of the newer kinds, yet taken collectively and together with its box-like foliage, it is unsurpassed. My plant is in a mixture of peat and loam, was kept in a shady part of the greenhouse during the summer and fall, and grows like a willow—so luxuriant indeed as to prevent its flowering with that freedom I know it to be capable of.

HYPOCYRTA STRIGILLOSA.—A Gesneraceous plant, between a *Columnnea* and a *Nematanthus*. It is more woody than either of them, and does not seem to grow higher than a foot or so, forming a bushy shrub. The leaves are about an inch in length, and so covered with fine hairs as to give them a peculiar grey appearance; they are thickly set on the branches, and bear a scarlet sessile flower in their axils. Our plant was received last spring from Messrs. Hovey, and being small, produced a few flowers in the fall. This plant kept but slightly flowering in a warm greenhouse, is now showing flower abundantly, while another kept growing strongly in a high stove heat is but just showing its flower buds. It seems to be a plant which by management may be had always in bloom; and, as a small growing, neat flowering plant, will, I have no doubt, get an "extensive circulation."

IXORA incarnata.—Since writing the notice of this plant I have flowered the *I. rosea* of the Philadelphia collections, and find them identical. Can any one inform us whether there is a distinct *I. rosea*?

THOS. MEEHAN.

Templetonia glauca.—A Leguminous plant, in bloom at Mr. Knorr's, W. Philadelphia, from New Holland, with obovate glaucous leaves, and red flowers of the papilionaceous shape peculiar to the order. It was imported last spring from Mr. Van Houtte, of Ghent. It is free flowering, and a decided acquisition to the greenhouse. Sandy loam and peat seem to suit it well.

Epacris Atleeana, one of the best varieties of this favorite genus, with a long white flower, shaded with pink at the base of the tube.

Several new Azaleas were in bloom, among them were *Exquisita*, *Prince Albert*, *Striata*, *Formosa*, and others. They were received last fall from Messrs. Low, of Clapton, and Van Houtte.

CALENDAR OF OPERATIONS.

FRUIT.

GRAPES, OUT-DOORS.—Opinions are varied with regard to the evil effects of bleeding that follows pruning vines when the sap is in active motion. The late Mr. Downing, (considered good authority in such matters) has somewhere remarked that "all the bleeding that occurs from cutting last year's wood will not hurt them in the least." And Mr. Hovey (authority equally trustworthy) says, "that no danger need be apprehended from a bleeding." We know that many cultivators would rather leave them unpruned than risk this bleeding process, although we have not seen any direct evidence that it is injurious ; while on the other hand, we have reason to believe that it is not. It is a pity for the principle of the thing, that it is not. The fact is, that the grape-vine is a plant of too accommodating a turn, were it less so, we would sooner agree to a definite system of management.

The soil about their roots may receive a slight top dressing in the following manner, first, sprinkle a little guano on the surface, then lay on two or three inches of a mixture of fresh loamy soil and charcoal dust, forking the whole slightly over without injuring the roots. Enriching the surface offers an inducement for the roots to seek upwards, were they will be influenced by the atmosphere, and subjected to those chemico-electrical agencies so beneficial to vegetation. Should they be deep in unsuitable soil, a fresh supply may be obtained by bending down the branches, so that a part may be covered with soil. Fresh roots will emit freely from these covered parts, and by mulching in summer, and annual top dressings as above, they will be completely renovated, and in every respect "as good as new."

GRAPES, IN-DOORS.—In cold graperies the vines will soon be starting to growth. Keep the house open and avoid excitement. A few mild days will cause some of the buds to burst, which are liable to injury from cold day winds, and sharp night frosts, that frequently occur at this season; vegetation should therefore be retarded as far as practicable. The horizontal position that the vines should now be in, will retard them somewhat, particularly if they are tied close to the parapet wall, where they will be shaded from sun. The house may be shut up close on *frosty* nights but not otherwise. The border may also be kept covered, to prevent absorption of heat by the soil, and growth of the roots. These precautionary measures are requisite, as this is the principal difficulty we have ever experienced in houses destitute of artificial heat. Should the thermometer outside indicate a few degrees of frost when the vines have commenced growth, if

you have no other resort, *fill the house with smoke*. We have frequently applied this remedy with success under the above circumstances, and can confidently recommend it to those similarly situated.

PLANTING.—Real lovers of gardening never consider anything a *trouble* that has in it the remotest likelihood of success. Therefore if you have a few choice trees or shrubs that you intend transplanting by and by, success will be more certain if the soil where they are to be placed is turned over occasionally during bright sunshine, and covered up at night with a sprinkling of rough litter of any description, to prevent radiation. Not only will the soil be rendered more friable by this means, but considerable heat will be absorbed, and thus some of the advantages of autumn planting secured.

RASPBERRIES.—If not already done, no time should be lost in pruning out the old bearing wood from these, leaving four or five canes for this year's crop. Wood ashes, bone dust, and lime rubbish are good for top-dressing, forking it in between the rows. In forming a new plantation trench the ground deeply, manuring heavily in the bottom of the trenches, On thin soils with a hard bottom, these fruits seldom come to much, unless they are heavily mulched—a practice that cannot be too often insisted on in all cases where it can be applied. They ripen at a season generally warm and dry, and if the roots have not some resource beyond the mere surface, the fruit will shrivel and ripen prematurely. Plant in rows four feet apart every way. Tying to upright stakes is the common method of securing them. Those who have a fancy for neatness combined with utility may form a wire fence and train them on it like grape vines. The finest we ever saw were produced in this way. Not that we place much weight on any method of mere training for the securance of any crop, provided other circumstances are favorable, but in the case of raspberries when bundled close together one half is crushed and suffocated. It may also be remarked in passing that this fruit is worthy of being cultivated more largely than it is. It has many commendable properties when well cared for. Horticulturists are ever running to extremes. At present pears and strawberries are monopolising all the talk from Cincinnati to Boston. S. B.

MARCH—APRIL.

FLOWER GARDEN.—In the annual trimming of the “verges” or grass edges of walks, they ought not to be cut so as to appear like a wall on each side—the smaller it can be made the better the walk will appear. Where they have become deep from the washing away of the gravel, now is the time to apply fresh. The old gravel should be stirred with the point of a pick before the application of the new. Lawns should have all litter that may have blown on them during winter at once cleared off, if with a birch broom it will be much preferable to the rake—and receive a good rolling

with a heavy roller. In my opinion there is nothing more refreshing, or at any time more agreeable than a "soft velvety carpeted lawn," and if the directions I have formerly given be attended to, and the newly sown lawn be kept rolled after summer showers, mown every two weeks, and the cut grass swept off, not raked, we can have in America the much envied "green carpets" of old England's flower gardens. *Hardy evergreens* add much to the beauty of the pleasure ground. The beginning or middle of April is as good a time as any to transplant them. Some of the newer kinds of *Coniferæ* form very handsome objects when planted by themselves singly in conspicuous positions. The *Deodar cedar*, with its bluish gray color, and pendulous branches, is especially beautiful. The *Cryptomeria japonica* can scarcely be excelled in its way. The *Araucaria imbricata* does not seem to be hardy in Philadelphia or it would be a unique subject for a single specimen. *Abies pinsapo*, *Douglasii*, and *Smithiana*, and *Pinus Hamiltonii excelsa*, and I believe *ponderosa*, are entirely so—all of them distinct and beautiful. The Hemlock, *Abies canadensis*, is also a very elegant and graceful tree when planted singly, and in some situations the Norway Spruce, *Abies excelsa*, is beautifully adapted. It is no use to plant any of them in wet grounds, nor do they do well in such as are hot and dry—they prefer a loose friable loam, where the rain can easily penetrate, soak through to the under strata, and pass right off. Such a soil is always moist, and cool, and yet never *wet*; and in such a soil all the *coniferæ* will luxuriate. The *English Holly* when grafted on the American (*I. opaca*) is perfectly hardy, and one of the very best of evergreens. In the fall calendars I gave lists of plants adapted to bedding out, so that they might be propagated and got on hand by the spring—as many have not seen the back numbers, and others may have to procure from the florists the plants they require, I insert a list of things of various colors best adapted to planting in masses. Annuals are generally the worst of all things—something to stay in bloom the whole season being preferable. *Red, crimson, or deep rose*, Scarlet Geranium, Verbena Robinson's Defiance, Ruellia formosa, Cuphea platycentra, Alonsoa linearis, Gaillardia picta, Zinnia. *Purple and dark violet*, Petunia, Duke of Bedford, Lord John Russell, or even the common small purple; Globe amaranthus, Marvel of Peru, Senecio elegans. *Blue*, Heliotrope, Blue Queen Verbena, Salvia patens, Plumbago Larpentæ, Nierembergia gracilis or filicaulis. *White*, Vinca alba, white Petunia, Queen Verbena, white amaranthus, sweet alyssum. *Yellow or Orange*, Lantana Mexicana, L. crocea, Lychnis coronaria, perhaps the new orange amaranthus, and Jasminum revolutum. Whenever the weather permits seize every opportunity of getting the ground dug in readiness for the plants next month. Wherever there are *box edgings* they should be neatly trimmed once a year, at this period. *Carnations and Pinks* that may have been slightly protected during the winter should be planted out at the earliest

possible opportunity. The same with *Chrysanthemums* that flowered in pots during the winter—these should be put out in very rich soil so that the new wood may afford luxuriant wood for next year's cuttings.

GREEN HOUSE.—One of the sweetest and most desirable things in floriculture is the *Tuberose*—pot a dozen or so singly in 8 in. pots and get them along early; sand, loam, and cow-dung, in equal proportions suits them. *Azaleas* and *Rhododendrons* require a large supply of water while in flower, and manure water once a week. If it is desirable to re-pot them, do so as they are about to go out of flower, and before they start into a new growth. They will do better if kept close and warm while growing. In general they do not require potting often—growing to a very large size, healthy, and flowering abundantly in very small pots. Save seeds of the finest flowers of your *Chinese Primroses* as they ripen, and sow them at once. They will make fine plants for next winter's flowering. Next winter, too, requires at the present time attention in other quarters. For blooming then, commence now to propagate *Spiræa Reevesiana*, white; *Eupatorium elegans*, ditto; *Stevia serrata*, ditto; *Henfreyia scandens*, and *Spiræa prunifolia*; also pink colored, *Begonia incarnata*, and *Pentas carnea*, scarlet; *Euphorbia jacquiniæflora*, and *Poinsettia*, *Habrothamnus elegans*, *Cyrtanthera* (*Aphelandra*) *Gheisbrechtii*. For yellows there are nothing preferable to *Jasminum revolutum*, and *Cestrum aurantiacum*. In some cases the *Strelitzia reginæ* is a valuable winter blooming plant. I have one which has this winter born over eighty flowers. Don't follow old rules about throwing away your *Hyacinth* bulbs after flowering, turn them out in a bed of rich sandy loam, take them up in the summer, re-plant in a fresh bed in the fall, let them stay there all winter and flower there the following spring; then take them up again, and they will be as good as ever. This will save you many a thirty cents for fresh bulbs. The venders will not quarrel with you as they will get your spare money for other things which you cannot raise. I hope to see the *Hyacinth* more generally loved than it is, and America the chief mart for their exportation, *vice* Holland, as the old gazette would say, "superseded." The Jersey men should see to this. *Camellias*, while growing must have a bountiful supply of water, and the free use of the syringe. The aspects and circumstances under which they are grown, will of course vary the treatment in some degree.

HOTHOUSE.—At this season of the year insects should get a closer looking after in this department than at most others, as, if a few have escaped the winter's crusade against them, they will soon be as bad as ever; one killed now, will save your plants more than a thousand in the fall. *Tillandsias*, *Bilbergias* and *Bromeliaceous* plants, amongst the finest winter flowering plants for the dry stove, should be repotted now into rich loam, grown in a strong heat, with plenty of water, for a couple of months, then placed in a hot, sunny spot, where they will get little water, till September, when, re-

ceiving gradually an increase of moisture, they will reward you handsomely. The "tall Cacti," as the Londoners call them, such as *Cereus speciosissimus*, *Phyllocactus Jenkinsonii*, *Ackermanii*, *speciosus*, and so on, ought to be kept moist and warm at this season; they ought to flower abundantly in May. *Phyllocactus crenatus* is said to be a great acquisition. The *Clerodendron* is an essential now-a-days in old country collections of stove plants, judging by the reports in the papers; about here, though some kind or other is "everywhere," they are not grown so well as their beauty deserves. They require good pot room, a rich, loamy soil, a strong moist heat and manure water while growing, and an abundance of light when about to bloom. *Clerodendron paniculatum*, *speciosissimum*, and *Kämpferii*, are three of the best. Orchideous plants, though some are in bloom continually, will be mostly flowering now, especially of the genera *Oncidium*, *Gongora* and *Dendrobium*. The house may still be kept for them at about 65 or 70 degs., but they should receive a slight syringing at least two or three times a day.—They have succeeded in raising these from seed in England, according to the *Revue Horticole*. Can't we come up to this?

VEGETABLE GARDEN.—Many put in a crop of dwarf or bush Beans about the end of the month—I find no advantage in sowing them before May.—All crops of which a succession is required, as Peas, Beans, Radishes, Lettuce, &c., should be sown as often as the preceding crop is fairly above the ground. Having attended to the crops mentioned in the last calendar, the Beet will come next, preferring a deep, sandy loam, well dunged the year previously; the Turnip Beet is best for this crop; the long Radish Beet will be best for winter use, and should be sown a month later. The Carrot will thrive in soil similar to the Beet; lime is an excellent manure for it—I use the long orange. Celery may be sown about the end of the month, in a bed of very light rich soil, and Tomatoes, Egg Plants, and Peppers sown in pots or boxes, and forwarded. It is as bad to be too early with these as too late, as they become stunted.

T. J.

For the Florist and Horticultural Journal.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this society occurred on Tuesday evening, March 15, 1853, in the Chinese Saloon. The President in the chair. The usual exhibition of the large and imposing Azaleas, Rhododendrons and finely grown specimens of greenhouse plants presented at the March meetings, was withheld on this occasion owing to the sudden change in the weather, from mild to severely cold, yet those who attended were amply repaid by the display of many interesting plants, and very beautiful cut flowers shown in the tasteful designs, Baskets of cut flowers and Bouquets.

Mr. J. F. Knorr's gardener exhibited a dozen of choice blooming plants, six pots filled with Hyacinths, and the following new kinds *Templetonia glauca*, *Abutilon striatum Van Houttii*, *Azalea alba striata*, *A. Exquisita*, and *Cinerarias*—*Carminata*, Vicar of Wakefield, *formosa*. Mrs. Sydney Herbert, Marianne and Amie Robsart. Mr. C. Cope's gardener brought a dozen of select greenhouse plants, a collection of *Cinerarias*, and two species shown for the first time—*Rhodostemma gardenoides* and *Hypocyrtia strigilosa*. Peter Raabe exhibited a large pyramid of Hyacinths—a rich show.

On the fruit table were seen, a small basket of strawberries from Mr. Cope's houses—Easter Beurre pears from Thos Hancock—St. Germain and Nouvelle d'Esperin pears and Reinette franche apples from Mrs. J.B. Smith—and Newtown Pippin and Catharine apples from R. Cornelius.

The following are the premiums awarded :

By the Committee on Plants and Flowers. *Azalea*, for the best grown specimen to Thos. Meghran, gardener to R. Cornelius. *Plants in pots*, for the best 12 specimens to John Bell, gardener to J. F. Knorr; for the second best to Thomas Meehan, gardener to C. Cope. *New plants* shown for the first time, a premium of two dollars to Thos. Meehan for *Rhodostemma gardenoides*. The silver medal to John Sherwood for an American seedling *Camellia*, double white, a very superior variety. The Committee called the attention especially of the society to the following new plants presented for the first time, which they consider an acquisition, *Templetonia glauca*, *Azalea alba striata*, *A. exquisita*, *Abutilon striatum Van Houttii*; and *Cinerarias*—*Carminata*, Vicar of Wakefield, *formosa*, Mrs. Sydney Herbert, Marianne and Amie Robsart from the houses of J. F. Knorr. *Bouquet design*, for the best to Thos. Meehan; for the second best to Thos. Meghran. *Basket of cut flowers*, for the best to Thos. Meehan; for the second best to A. Hall, gardener to D. Rodney King. And special premiums to Thos. Meghran for a basket of flowers, and to Peter Raabe for a fine pyramid of Hyacinths.

By the Fruit Committee. *Pears*, for the best ten named specimens, Easter Beurre to Thos. Hancock. *Apples*, for the best ten specimens, the Newtown Pippin to Thos. Meghran; for the second best, the Reinette franche to F. Guoin. And a special premium to Thos. Meehan, for a basket of Hovey's seedling Strawberries.

By the Committee on Vegetables. For the best and most interesting display by a private gardener to Thos. Meghran; for the second best to Thos. Meehan.

AD INTERIM REPORT.

The Fruit Committee respectfully report: That since this last stated

meeting of the Society, they have received and examined specimens of the following varieties of Fruits.

From Mr. Charles Kessler.—*The Reading*.—This valuable Winter pear has been noticed in several of our ad interim reports. The present specimens, which were eaten on the 11th inst., have strengthened the favorable opinion previously expressed by us of its merits.

The Keim, which we have previously described, appears to be a late keeping Winter apple, assuming a more beautiful waxen appearance with the advance of the season.

Evening Party.—This is the third time this delicious little apple has been submitted to our examination during the present season. Each successive trial has served to confirm our estimate of its value.

The Orange.—A medium sized native apple, from the garden of Mr. Nicholas Lot, of Reading. The original tree which stood on the adjoining premises is now dead. The fruit is roundish, slightly oblate, faintly ribbed, of a warm yellow color, approaching orange; stem short, thick; cavity open, shallow, obtuse, irregular; basin shallow, wide, plaited. Flesh yellowish, with a slight orange tint; flavor sprightly; quality "good."

The Ohlinger.—A native apple of Pennsylvania. It originated with Ohlinger in Alsace Township, Berks County. It fruited in 1852, for the first time. Fruit below medium size; roundish; waxen yellow, with a pale brownish cheek containing many white spots with usually a russet speck in each; stem $\frac{1}{2}$ of an inch long, slender; cavity deep, wide, russetted in rays; basin wide, shallow, furrowed; seed brown, short, broad, roundish ovate; flesh yellowish white, fine texture; sprightly flavor; quality "good."

The Dumpling.—A large roundish, oval yellow apple; stem short; cavity contracted, shallow; basin narrow, rather deep. This is entirely distinct from the Dumpling of Coxe, and is a good deal cultivated in some parts of Pennsylvania for culinary purposes.

The Alsace.—A seedling apple of Alsace township; size medium; form conical; skin whitish yellow, with a pale blush on the exposed side; stem short, slender; cavity narrow, acuminate; basin deep, open; flesh whitish, fine texture, juicy; pleasant flavor; quality "good." Though eaten on the 12th of March, it is said to be in eating order in September.

The Fallenwalder or Fornwalder.—The Fallwater of Downing.—A large, yellowish green apple, with a brown blush, uniformly fair, and of "good" quality. It is abundant in our markets, and, at this season of the year the largest apple to be found there.

From Mr. W. Boas, of Reading.—*The Krouser*.—This apple has been described in a previous report, and is represented as being wonderfully productive.

From Mr. Casper Hiller.—*The Hess*.—A native apple of Conestoga,

Lancaster county, Pa. Size medium; form variable, sometimes roundish, often conical; red in stripes of different hues; stem short, rather stout; cavity narrow, moderately deep, slightly russeted; basin deep, narrow; flesh greenish white, tender; flavor agreeably aromatic; quality "very good."

To the Pennsylvania Horticultural Society:

In accordance with a suggestion of the society in one of its regulations, that "notices of peculiarity in culture, management, &c., of the objects exhibited are often desirable," I make a few remarks on the sexual characters of the plants of Hovey's Seedling Strawberries I have exhibited this evening.

This variety is usually classed as a pistillate, and considered worthless when not planted in the neighborhood of a staminate kind. I find by repeated observations made while forcing them that they become staminate by being forced slowly in a moderate temperature, receiving at the same time an abundance of light and a regular supply of moisture—conditions well known as essential to a healthy luxuriansness of the Strawberry. On the other hand, I find that whatever tends to check that luxuriance has a tendency to produce the pistillate form. In the specimens before you, one very weak from over-watering and deficient drainage, is a pistillate; another, a weak plant, and forced rapidly, has the anthers very nearly abortive; while the other plant, which has been in the forcing house since the middle of January, and in circumstances every way favorable to their healthy development, are as perfect as possible.

Last season a number of plants started in a temperature of 65, and ripened in one of 75 to 80 degs., produced all pistillates; twelve runners from these plants were selected, potted in small pots for forcing; seven of the strongest of them produced staminate flowers, the other five pistillates, like their parent plants. Another set of one hundred pots last season, forced very rapidly, produced plants *all* pistillates; a similar set forced early this season, produced all but the weakest plants perfect.

It has been doubted whether Alice Maud, in many collections, is correctly so; and it has been suggested that the growers should observe whether their plants are pistillates or staminates, in order to decide.

I have submitted the above observations to you hoping they may have a practical bearing on that question by showing the distinction between pistillates and staminates to be worthless—cultivation producing either one or the other.

THOMAS MEEHAN.

Members Elected—Jos. Harrison, John Collins, Jacob Moore, and Francis Metcalf. Adjourned.

THOS. P. JAMES, *Rec. Sec.*

STATE AGRICULTURAL SCHOOL CONVENTION.

HARRISBURG, March 9, 1853.

The Convention was called to order by General Simon Cameron, of Dauphin county, who moved that Christian Myers, Esq., of Clarion county, take the chair. John Montgomery, of Northumberland, and Dr. A. L. Kennedy, of Philadelphia, were chosen Secretaries.

On motion of G. Blight Browne, of Montgomery, a committee of seven was appointed to nominate permanent officers of the Convention.

The Committee consisted of Messrs. G. Blight Browne, of Montgomery; Wm. Heister, of Berks; B. O. Way, of Allegheny; H. N. McAllister, of Centre; J. B. Johnson, of Erie; A. O. Heister, of Dauphin; J. W. Alexander, of Washington.

Dr. A. L. Elwyn moved that the counties of the State be called, and the delegates present their credentials in order. Thirty-six counties were found to be represented.

The Committee on nominations submitted the names of the following officers:

President.—John Strohm, of Lancaster.

Vice Presidents.—Everard Ohlis, Juniata; John Murdoch, Allegheny; Samuel Mills, Erie; Charles B. Trego, Philadelphia.

Secretaries.—A. O. Heister, of Dauphin; John M. Sullivan, of Butler; Alfred L. Kennedy, of Philadelphia.

Judge Strohm, on taking his seat as presiding officer, thanked the Convention for the honor conferred, and called the earnest attention of the members to the importance of the proposition before them.

Voted, on motion of G. Blight Browne, of Montgomery, that a Committee of seven be appointed to propose business for the action of the Convention. The Chair appointed Messrs. G. B. Browne, of Montgomery; A. L. Elwyn, of Philadelphia; F. M. Watts, of Cumberland; Simon Cameron, of Dauphin; Benjamin Herr, of Lancaster; A. S. Roberts, of Philadelphia; and — McAllister, of Centre.

EVENING SESSION.

Convention re-assembled at 7 P. M.

Judge Strohm, of Lancaster, in the chair.

The report of the committee appointed to prepare business was presented. It is an able document, entering at length into the great question involved, and recommending a Farm School and Model Farm, of about 200 acres, with accommodation for one hundred pupils.

The report closed with the usual resolution, which, after amendment, was adopted, as follows:

Resolved, That Frederick Watts, of Cumberland; Simon Cameron, of

Dauphin; Christian Myers, of Clarion; H. Jones Brooke, of Delaware; and the President of the Convention be a Committee, whose duty it shall be to draft a bill in accordance with the principles of this report, and submit the same for the action of the Legislature.

The resolution and report were discussed by Frederick Watts, Cumberland; John C. Cresson, Philadelphia; Benj. Herr, Lancaster; David Mumma, Jr., Dauphin; Wm. M. Meredith, Philadelphia; G. Blight Browne, Montgomery, and Jas. Cameron, Northumberland.

Adjourned *sine die*.

The New York Horticultural Society held its monthly meeting on the 7th of March. We see by a report in a New York paper that Messrs. T. Hogg & Son exhibited some flowers, and Mr. Isaac Buchanan some plants, among which were specimens of his new Verbenas, *Painted lady*, *P. B. Mead*, and *Eliza*; and Mr. Cranston seedling Cinerarias and Pansies.

The Albany and Rensselaer Horticultural Society held their annual meeting on the 16th of February. The display of fruits and flowers was very fine; most of the apples and pears were from the nursery of Messrs. Ellwanger & Barry, of Rochester. The show of Camellias and greenhouse plants was also very good.

Maryland Horticultural Society.—At a meeting of the Society, held in Baltimore on the 7th of March, the following officers were elected for the present year:

President—Dr. Thomas Edmondson.

Vice Presidents—Thomas Winans, Henry Snyder, A. C. Pracht, Samuel Sands.

Treasurer—Edward Kurtz.

Corresponding Secretary—William Saunders.

Recording Secretary—R. F. Pentland.

Assistant Secretary—John Tuomay.

Secretary to Committees—H. B. Jones.

Committee on Plants and Flowers—Thomas Winans, C. U. Stobie, John Tuomay.

Committee on Fruit—Henry Snyder, John Feast, Wm. Saunders.

Committee on Vegetables—S. Feast, Sr., N. Popplein, R. F. Pentland.

We had the pleasure of seeing in bloom at Mr. Knorr's in West Philadelphia, *Eschynanthus albidus*, a species newly introduced by him. It has the habit of *pulcher*, with the same ovate leaves. The calyx is deeply cleft as in *speciosus* and the corolla is small, waxy white, spotted with brown on the inside, shaped like a Gloxinia, resembling except in the fringed edge of the corolla, the flower of *Drymonia punctata*. It is free-flowing and a decided acquisition.

MR. EDITOR:—In a late number of the "Country Gentleman," published at Albany, I see a report made by a certain gentleman, delegated by the Albany and Rensselaer Horticultural Society to visit the annual exhibitions of the Pennsylvania and New York Societies. After a rapid touching upon expectations and disappointments upon his arrival at Philadelphia, a short notice of two varieties of pears, and a query concerning Duchesse d'Angouleme and dry weather, he "descends to the floral room." Here he is struck with the appearance of several specimens of *Manettia glabra*, which certainly deserved the attention they received; and then he finishes the paragraph by a short attack on props for *Achimenes* and yard long specimens, winding up with the wrongly named Cacti.

Now as to those *Achimenes*, we venture to say that no better specimens, no, or none so good, were ever shown before in this country; and if any one from Albany or any other place, can show better without sticks, or with less sticks, I should like to hear of it. The "yard longs," and "hop-poles," we hope have had their day—at least in this city. As to the Cacti, the writer of the report under notice knows that in the names of no tribe of plants is there more confusion than in this.

Then our "committee of one" goes off to New York, where he is indignant at the judges for awarding a premium to some specimens of *Verbenas*, "which were hideous, supported by a forest of sticks, which, in point of clumsiness, far surpassed those at Philadelphia." Having had a "quantum sufficit" of *Achimenes* and *Verbena*, he commends the timber attached to a *Lycopodium umbrosum*.

Next come notices of single specimens—*Oldenlandia Deppei*, which has been shown here a half-dozen times in the last year; *Schubertia graveolens*, which he did not see in Philadelphia, although it was there;—a handsome fern—there was a collection of twenty species in the Philadelphia exhibition; and several others. But he says nothing of such novelties as *Balsamina latifolia alba*, *Amherstia nobilis*, *Brownea grandiceps*, and *B. coccinea*; *Tacsonia sanguinea*; *Nepenthes Rafflesiana*; *Pharbitis limbata*; *Stenocarpus Cunninghamii*; *Medinilla magnifica*, and many others.

We are not at a loss to discover why he concludes his criticism with the remarks that "in quality, not in quantity, the New York exhibition far surpassed that of Philadelphia." I hope that next fall our Society will depute some persons to visit the New York Society, that we may see how badly we are beaten. Yours truly,

JOHN.

MR. EDITOR:—I see that you have also had *Cantua bicolor* in bloom. It is now two years that I have had it in bloom, on small plants three or four inches high; it is a greenhouse plant which grows freely, the only trouble be-

ing to keep off the red spider. It does very well in the open air, *fully exposed to the sun*, in almost any kind of soil. I exhibited one plant last week which had about thirty-five or forty flowers on it. It was rather pretty, but does not repay one for the trouble it gives in the summer time to keep it free from the above-mentioned pest; its chickweed-like foliage, like *Hoitzia coccinea*, is very apt to turn yellow, and burn altogether; from what I know of it I consider it worthless.

Æschynanthus pulcher is in flower with me since last March or April—I have only two plants, and since they commenced blooming I do not think they have been without flowers, one or the other, for three weeks altogether. It grows freely, and as Mr. Meehan says, is beautiful; but I think that when we have good size plants of *Æsch. miniatus* it will surpass it. *Æschynanthus speciosus* is also very handsome, and grows more in the way of *Æs. grandiflorus*. Messrs. Parsons & Co., had a large quantity of exceedingly fine young plants of this last, last summer, all covered with flowers.

ANTHOPHILUS.

We were invited a few weeks ago by Mr. Peter Mackenzie, of west Spruce street, to see a seedling *Camellia* of his, then in bloom. It is a white, of good imbrication, great regularity, and shape of petal in this being equal to *Fordii*, delicately shaded with pink, and with a few stripes of a deeper color. It has been pronounced by competent judges to be one of the finest flowers ever raised. We were unable to have it figured—but another year we shall give our subscribers a representation of it.

The *Horticulturist* for March, is as usual neat in appearance, and interesting and useful in its information. Mr. Barry is proving himself the worthy successor of the late editor.

The *Germantown Telegraph* has a wide circulation and a well deserved reputation as a family newspaper, and is a good authority in farming matters. Major Freas, its editor, is a successful farmer.

The *Working Farmer*, published monthly in New York, Prof. J. J. Mapes, editor. The fifth volume of this periodical has just commenced; it is devoted to the improvement of farms and farmers. The reputation of its editor is a sufficient guarantee for its usefulness.

We receive the *Soil of the South*, published at Columbus, Ga.—An excellent authority for the section in which it is published, and to the productions of which it is devoted.

Letters received from Oliver Taylor, R. Parnell, A. J. Fuller, Wis., R. G. Courtenay, Louisville; Jas. Stephenson.

Messrs. McIlvain & Orr of John st. N. Y., will receive any subscriptions due us there. E. J. Tryon, 98 Chambers st. will also act as agent. Those of our subscribers who have not yet paid, we respectfully request to do so.



Ch. Schneessle del.

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THE FLOREST AND ENTERTAINMENT JOURNAL

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Mr. Nelson is a native of England, and has been in the United States for many years. He is a member of the American Society of Civil Engineers, and has been employed by the United States Government in various capacities. He is now employed by the United States Army as a civil engineer. He is a very experienced and capable engineer, and has been in the service of the United States Government for many years. He is a very capable and experienced engineer, and has been in the service of the United States Government for many years. He is a very capable and experienced engineer, and has been in the service of the United States Government for many years.



THE FLORIST

AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, April, 1853.

[No. 4.

PHARBITIS LIMBATA.

ETYM. $\varphi\alpha\sigma\beta\eta$, Colour, in allusion to the brilliant colours of the flower.
Convolvulaceæ—Convolvulæ. Chois. Pentandria-Monogynia.

CHARACT. GENER.—“*Calyx* 5 sepalus. *Corolla* campanulata aut campanulato-infundibuliformis *Stylus* 1; stigma capitato-granulatum. *Ovarium* 3 rarius 4-loculare, loculis 2-spermis.”

“*Herbæ* volubiles elongatæ speciosæ, perplurimæ ornamenti gratia in hortis cultæ, pleræque americanæ, retrorsum pilosæ.” Chois.

Pharbitis, CHOISY. Conv. or. p. 56 et in DC. prod. IX. p. 341.

Convolvuli et Ipomeæ sp. AUCT.

Convolvuloides, MOENCH.

Ornithosperma, RAFIN.

CHARACT. SPECIF.—“*P. annua*, caule retrorsum piloso, foliis cordatis integris angulatis, trilobis-que pilosis-que lobis basi dilatatis acuminatis, pedunculis solitariis unifloris petiolis duplo brevioribus, sepalis basi hispidis apice pilosis linearibus acutis longissimis.” LINDL.

Pharbitis limbata, LINDL. in Jour. of the Hort. Soc. V. p. 33. A. HENFREY, in Garden. Mag. of Bot. p. 217 cum. icon.

“Nothing is more common in gardens than the ci-devant *Convolvulus purpureus*, now become the principal type of the new genus *Pharbitis*. This plant, of tropical origin, but whose annual duration adapts it to the out-of-door cultivation in our temperate regions, forms the commonest ornament of trellises. Why not expect the same usage for the *Ph. limbata*? an annual species like the first, and which will take precedence of it, as well in size as in the colors of its flowers. It is now two years (Oct. 1849) since the new *Pharbitis* was communicated to the Horticultural Society of Chiswick, by its introducers, Messrs. Rollinson of Tooting, to whom their collector, Mr. J. Henshall, had sent the seeds from Java. It obtained, and deservedly, an honorable mention, and was described as a new species by the learned Dr. Lindley, who distinguishes it from the *Pharbitis Nil* on account of the greater length of its sepals, of the more marked hispidity of these organs, and of the comparative

shortness of its peduncles. For want of objects of comparison, we accept this distinction as founded, in mentioning for the acquittal of our conscience the doubts expressed in this matter by Dr. A. Henfrey, one of the skilful editors of the "Gardeners' Magazine of Botany."—DR. PLANCHON, in the "*Flore des Serres*."

This beautiful climber flowered last summer in the garden of Mr. J. F. Knorr, of West Philadelphia, who obtained it from Messrs. Low, of Clapton. It is very free flowering, and nearly equal in size to *P. Learii*; I have measured them $3\frac{1}{4}$ ins. across the limb. It will need in this climate to be started in the greenhouse, and the quicker it is grown the better, as it sometimes commences to flower in the axils of its first leaves, when all hopes of its growing may be given up.—ED.

HISTORY AND CULTIVATION.

Few orders of plants have attained to such a popularity as that of which the plant figured is a representative—*Convolvulaceæ*. Its cottage name of "Morning Glory" is significant of its extensive estimation amongst all classes, for the people will not have a "jaw-breaking" name for a flower which they love. Its popular appreciation is also a test of its beauty, for mere rarity has few admirers amongst the masses. Very few species are in cultivation compared with the great number that have been described by botanists. In their wild state they are scattered over the greater part of the world. In the tropics they are very abundant, becoming scarcer in temperate latitudes, till in cold regions they disappear altogether. In the former they are principally comprised under *Ipomœa*, receding from the tropics they merge into *Convolvulus*, till reaching the boundaries of their geographical zone they dwindle, as it were, to that section represented by *Calystegia*, of which the *C. sepium* of English hedges and the pest of British gardeners in cultivated ground, is a familiar example. That section of most importance to cultivators is comprised by *Ipomœa*; they are all twining shrubs, the perennial species being either tuberous or fibrous, and all dying down after they have produced their flowers and perfected their seeds. Where the flowers are not allowed to perfect their seed, some species will

retain portions of their stems for several seasons. The genus *Pharbitis* is so named by M. Choisy, a French Botanist, from a Greek word in allusion to the great beauty of the flowers—is very nearly allied to *Ipomœa*, differing a little in the formation of its seed vessel, but none in the habits or appearance of the plants comprising it. There are several other genera separated from *Ipomœa* by similar differences, as the *Quamoclit* represented by the *I. quamoclit*, or “cypress vine;” *Mina*, represented by *I. lobata*; *Batatas*, of which the *I. batatas* or sweet potato is the type; the *I. Learii* is perhaps the best known of any of the kinds referred to *Pharbitis*. The habits and appearance of *I. limbata* are weaker and altogether different from that species, but the flower is in every respect handsomer and superior to that very beautiful kind.

This species, like most of the *Ipomœas*, delights in a light, open soil, of a texture so as to be capable of receiving an abundance of water without ever being saddened—than which there is nothing more fatal. The soil I use is about three parts turfy loam to one of well-rotted dung, in well-drained pots; if the soil is well arranged by the use of large turfy portions, broken pots, and similar things, the *P. Learii* thrives well on the “one shift system,”—that is, it may be planted at once in the pot it is intended to bloom in. In the case of the present species, which appears of more delicate growth, it would be safest to repot it as often as the pot becomes lightly filled with roots, into sizes but a little larger. The larger the pot it can be flowered in *by this course*, the more luxuriant will be its growth and the finer the flowers. There cannot be finer objects for training on trellises in greenhouses or stoves; their flowers always look best when looking from a flat surface. Planted out in a conservatory border, they will give more satisfaction, though dying down in the winter, than the generality of perennial branched climbers, which, after one or two years’ growth, become naked at every part except that near the glass. Their growth in such situations is very rapid, several feet being but a few days’ work. They love a light and warm situation, and are very easily propagated from cuttings in a slight bottom heat.

Some object to the tribe on account of the resemblance such

choice plants have to the common idea of a "morning glory;" but others will deem the size, beauty and diversity of foliage, the beautifully marked and superior flowers, and the perpetual season in which they may be continued in flower, as preponderating advantages.

A PHILADELPHIA GARDENER.

THE CINERARIA.

Flowering from Christmas to June, and forming handsome specimens for decorative purposes at a comparatively small expense, both as regards attention and accommodation; and also furnishing a profusion of finely-shaped many-colored flowers for bouquets, which the Cineraria does, it well deserves to be, as it is, one of the most popular flowers of the day. It is of easy culture, and in most cases is well managed; but, nevertheless, in some instances where ample means exist, and also, doubtless, a desire to produce respectable specimens, it exhibits effects of the worst possible treatment. The following hints may enable such growers to produce creditable examples of this extremely useful plant. The ordinary method of propagating the Cineraria is by root suckers, which are produced abundantly by plants after blooming, when placed in a shady situation and properly attended to with water. The old plants should be broken up as early in August as suckers can be had strong enough; the latter should be potted singly in 4-inch pots, and placed in a shady part of a cold frame till well established, which will be in less than a fortnight. The plants should then be placed near the glass, and receive abundance of air, with a view to insure "stocky" growth. During autumn, and until severe weather occurs, a cold frame will form the most suitable situation for promoting rapid growth; but some attention will be necessary—not to wet the foliage any more than can be helped, and also to avoid cold currents of air, which turn the leaves foxy and greatly injure the plants. At the same time, however, admit sufficient air to prevent weakly growth. Water should be applied early in the day when necessary, giving a good soaking, and air admitted on the sheltered side of the frame to dry the atmosphere and foliage. During autumn and win-

ter the *Cineraria* is somewhat liable to mildew, especially some varieties; keep, therefore, a sharp look-out for this enemy, and apply sulphur the moment it appears to the parts affected. Mildew is greatly encouraged by a confined over-moist atmosphere, which is also very congenial to aphides, which will be sure to make their appearance under such circumstances. As soon as they are perceived apply tobacco smoke; but if the plants are kept in good health neither evil will be very troublesome. As soon as frost is likely to occur the glass should be protected every night with straw screens, or some efficient covering; for, remember, the *Cineraria* will not stand much frost, and neglect in covering may do irreparable damage.—With respect to potting, the plants should be allowed plenty of root room until near their period of flowering, and they ought never to be pot-bound during the growing season. Liberal shifts may be given to healthy thriving plants, but weak varieties should not be over-potted. Specimens may have 10-inch pots at the second shift, which will be sufficiently large for the winter, and in March they may be moved into 12 or 15-inch pots, according to the sized specimens desired. The plants should be removed to the front of the greenhouse, or to some light airy situation where they will be secure from frost and damp.

As before stated, keep them free from insects and mildew, and remove any decaying leaves as they appear. When the flower-stems begin to elongate they should be pegged or tied out, so as to keep the specimens open for the admission of light and air, and manure water will be highly beneficial at this stage. When the plants are in flower they should occupy an airy place, where they will receive abundance of light without being exposed to the full force of the forenoon's sun; but this applies only to plants flowering after the sun becomes powerful in spring. Those blossoming in winter like full exposure to the little sunshine and light which can then be afforded them. Where specimens are wished to flower in winter, cuttings should be selected about April, planted in light sandy soil, placed in a temperature of about 55°, and grown as freely as possible during the summer and autumn, and allowed to become pot-bound towards November, when if placed in a temperature of about

50° they will be found to flower freely, and will be exceedingly useful for furnishing cut flowers. Seeds sown in April produce useful plants for winter flowering, as they grow more vigorously during the summer. When the beauty of the specimens is over, remove the flower-stems, unless seed is wanted, and then only a few spikes need be left. Place the plants in a shady situation, and keep them clear of insects and properly supplied with water until a supply of suckers is obtained, when the old plants may be thrown away.—Good fresh turfy loam, in the proportion of two parts to one of two years old cow-dung, well intermixed with a quantity of clean sharp sand, according to the nature of the loam, to ensure efficient drainage, forms an excellent compost for the *Cineraria*. For small plants, leaf soil or sandy peat may be substituted for the cowdung. S.

In Gard. Chron.

For the Florist and Horticultural Journal.

DEAR SIR :

Once again do I obey the pleading of an anxious pen to advocate the cause of those guardian angels of mankind, flowers—I think I hear some sectarian exclaim, guardian angels in flowers—irreligious,—yes, I reiterate, my good friend, they are our guardian angels and our guiding stars too. What a waste would this wide world be were it not for them,—a fit tribute to the bride, and an accompaniment to the coffin,—grasped by the infant, and smiled upon by the centenarian—fit companions to the gorgeous ball-room, and alike welcome in the humblest cottage—adorners of the hero's brow, and an acknowledged sign of peace,—used to decorate the hair of the squaw, and no less becoming the most polished lady—admired by all, young and old, grave and gay—emblems of woman's love, and sharers in her true modesty—examples of purity, and teachers of design, they combine that compound excellence which may be sought for in vain elsewhere. Loudly does their wonderful structure, their varied colours and texture, their net-work of organization proclaim to the sceptic,—“examine and look through our form and make, and then decide whether or no we came into existence without the aid of a designer,—are all parts thus brought into this beautiful completeness and adapted to the ends to which we are so per-

fectly fitted merely by chemical affinity without any purpose being in view; has all this been accomplished by mere chance,—nay are we not silent monitors in the great creation of an All Wise Designer from the poles to the tropics, in the burning desert and the humid tropical swamp, and do we not teach thee to “look through nature up to nature’s God?” Here wilt thou find, sermons and books, for although some of us “are born to blush unseen and waste our perfume in the desert air,” there are plenty left immediately under thine own eye to satisfy thee that “not a plant, a leaf, a blossom but contains a folio volume in which thou “mayest read and read again, and still find something new, something to please and something to instruct.” Would that the better qualities of the human mind would become more frequently liberated from avarice and sectarian bickering and study God through his beautiful creation, to know him through his works, and to love him through these grand opportunities, surely we should be on the eve of the “millenium,” and we should be obeying more nearly the end for which our intellect has been given. It has been my privilege during life to be acquainted with many energetic botanists and florists, and I am proud to say that I never yet knew one who was a true enthusiast in the pursuit to believe that there was no Creator, on the contrary, the mind has been led to see and clearly demonstrate the beauties of design, and through it to a firm belief in and worship of a God without giving way to the rancorous spirit of intolerent bigotry.

I hope, Mr. Editor, that your valuable periodical will go on in its good work of advancing the cause of the flowers and floriculture generally, and that by your example, your readers may be prompted to pay more attention to these advisers, by which their true happiness will be more enhanced, not only by the pleasure accruing to themselves, but likewise in that which will be conveyed to all the members of their families. Where is to be found a finer picture of happiness, and what fitter subject for a painter, than where the head of a family has gathered around him his smiling wife and daughters, examining and admiring a well kept and flowery parterre.

Here is a pleasure that cannot be experienced in the acquirement of dollars and cents. A lasting gratification that is not to be found

in the ball room or in the halls of the sensualist. Here is to be found "Home where the heart is," and "pleasure without pain."—Neither is it alone that the "wedded" husband experiences a solace in these useful helps, for how often has the presenting of a bouquet of sweet flowers been a relief to "the love-sick swain," when his throbbing heart has supplied the utterance of his tongue at the time it ought to have been free, many can bear witness; and many a lady-love has been gained simply by these beautiful mediums, which, vice-versa of the "spiritual," have caused many a thumping heart to cease rapping by restoring confidence and assurance that the affection bestowed has been reciprocated. Young bachelors get then a knowledge of flowers, learn to appreciate their beauties and study their organization, for it may lead to some advantage, and prevent you from appearing awkward at the very time when your utmost grace and attraction is fully required. Young ladies, be sure to make yourselves acquainted with flowers, with their cultivation and their structure—they are true pictures of yourselves—they shew forth lucidly to the world, woman's disposition, her "rights," her affection, her character. The true lover of flowers invariably becomes a loving wife and a fond mother; she is enabled, through them, to guide the ideas of her rising offspring "how to shoot." Fit teachers of a Creator's dignity, they train the mind to contemplation, and prevent the worse propensities of the human mind, which is "prone to evil," from developing those untoward consequences that too often lead to bitter disappointment and regret. The study of flowers softens down the asperities of and ennobles the mind, produces affectionate and kind feelings, and brings peace and good will to all around.

WM. CHORLTON, N. Y.

AN ENUMERATION OF THE VINES OF N. AMERICA.

BY JOHN LE CONTE, F. L. S.*

In attempting to give some account of the vines of our country, a very considerable difficulty arises, even at the outset, from the great similarity of the different species. A family resemblance almost amounting to identity runs through the whole of them. Hence,

* See Proceedings Acad. Nat. Sci. Phila. Feb. 1853.

characters which are taken as distinctive, may appear too slight to warrant us in separating as distinct species what at first sight might appear to be mere varieties. But setting aside the shape and appearance of the leaves, the nature of the fruit and the method of its growth, in most cases, furnish a good criterion for distinguishing closely allied species from each other, which might in vain be sought for elsewhere.

Some years ago, when there existed a *mania* for the cultivation of the vine, there was much written about our native grapes, which only tended to involve in obscurity a rather plain and easily developed subject. Men unacquainted with botany, gardeners and others, remarkable only for their ignorance, folly and bad faith, gave names to various kinds of grapes, and frequently made a dozen species out of one. These names, barbarous and unmeaning as they are, were never bestowed on the same variety by any two writers; they saw differences where none existed, and endeavored to account for them by supposing impossibilities. Thus, a variety of *V. labrusca*, which has been called the Isabella and Catawba grape, and received several other as ridiculous appellations, has been considered as a hybrid between a European and one of our native species. This variety has always been said to have been first found in South Carolina, a country where the *V. vinifera* had at that time seldom or never been cultivated, and where it by no means flourishes, and where likewise the *labrusca* is not found. Although among some families of plants hybrids occur naturally or may be found artificially, yet it is difficult to understand how this ever can be the case in the genus *Vitis*. In forming a hybrid it is necessary to emascuate the flower which we wish to produce fruit, and to impregnate its pistil with the pollen of some other species; this is impossible in the present instance, on account of the minuteness of the flower and the parts of fructification. If the hybrid be supposed to be formed naturally, how could the anther dust of a cultivated plant be carried in a sufficient quantity from a garden to produce any effect in the thick woods of the Southern States?

Botanists have hitherto been able to detect but few species of *Vitis* in the United States. Michaux, Elliot and others, reckon but four

or five in the whole extent of our country. Rafinesque, by believing in the various follies of the day, and led aside by writings which fell into his hands and by the false statements which he collected from different quarters, made forty-one species of this genus, the most of which he had never seen. Although able to investigate and describe as well as any naturalist of his day, he was led astray by an insatiable desire of making new species, and appropriating to himself every thing that he saw or even heard of in natural science, he gave names to many things which never existed, and furnished accounts of them as if he had had them in his possession. Altho' his lucubrations are little worthy of notice, I have endeavored to identify as many of these numerous species as possible, and to reduce them to some degree of certainty; guided as well by what I remember to have seen in his possession, as by the short, and, in many instances, very imperfect descriptions found in his *American Manual of Grape Vines*; some I have not been able to determine, but scarcely think them different from others already well known. The number of species now recognized in systematic works is not more than five or six. I have increased this number considerably; with what propriety is for others to judge.

In my wanderings through our country, I have, I think, seen two more species, but have no memoranda of their characteristics which allow me to say more than that one was observed in the middle regions of Georgia, which bore grapes of a tolerably large size, in clusters of such density that the berries were pressed into a cubic form. The other was a small grape, of which the inhabitants of the upper part of North Carolina made a considerable quantity of pale red wine. This may be the *V. cordifolia* of Michaux, which species I have not been able to determine. The description of the last species, *V. palmata*, is taken in a great measure from recollection, and not from a late examination.

By the word *racemus* or *raceme*, I wish to be always understood to mean the bunches of mature fruit, the true and legitimate meaning of the Latin word.

1. *VITIS LABRUSCA*. Foliis lato cordatis, sublobato-angulatis, aut quinque-lobatis, acuminatis, irregulariter eroso-dentatis, supra gla-

bris, subtus irregulariter reticulatis, dense tomentosis aut velutinis, pube incana aut rufescente, baccis magnis rotundis avt ovalibus.

Hab.—In the Northern and Middle States. *V. sylvestris*, occidentalis, et vulpina, Bartram, in New York Medical Repository, Hexade II. vol. 1. *V. latifolia*, canina, luteola, rugosa, ferruginea, labruscoides, blanda, prolifera and obovata, Rafinesque's American Manual of Grape Vines. Vulg. Fox grapes, Isabella and Catawba grape.

Stem large and tall. Leaves widely cordate, sublobately-angled or distinctly three or five lobed; acuminate, irregularly eroso-dentate, above smooth, beneath irregularly reticulate, beneath densely tomentose or velvety; the pubescence of various length, hoary or rufescent. Berries large, .7 of an inch in diameter, round or oval.

The commonest form of this species has thick leaves, with a rather long pubescence beneath; the racemes are small, rarely with more than five or six berries on each; these are round, often oblate, black or red colored, acid and austere, frequently occasioning soreness of the lips and fauces of those who eat them. Another variety much cultivated under the names of Isabella, Catawba, and twenty other unmeaning names, has the leaves thinner, the pubescence underneath much shorter and more velvety, the racemes large, long and dense, the berries more or less oval, red or black, very sweet and agreeable to the taste, with a peculiar flavour, by some called musky. This is much cultivated in some parts of the Union, and wine of a fine quality is made from it. But like all the grapes of America the fruit is so watery that it is thought necessary to add sugar to the must, not considering that the must before fermentation can be made of any strength with regard to the sugar contained in it, by boiling, as is done in some parts of the country with apple and pear juice.

The best of all the varieties of this species is the white fruited, which does not differ in its leaf from that first described; the racemes are, however, large, long and dense, the berries white or green with a slight coppery tinge on the side exposed to the sun. It is, perhaps, the best grape indigenous to America which has been found in the Northern States. It is very sweet, and has but little of the pe-

cular flavor which almost all the others have, and is entirely free from all acidity.

2. *V. TENUIFOLIA*. Foliis tenuibus, lato-cordatis simplicibus, trilobis, aut quinquelobis acuminatis irregulariter dentatis, glabris interdum subtus arachnoideo-villosis, nervis rufo-pubescentibus. Racemis parvis, baccis magnis, rotundis, viridibus paulo glaucescentibus, ingratis acidis.

Hab.—In New Jersey formerly very common in the vicinity of Trenton, but now not to be found.

Stem tolerably large and tall; leaves thin, widely cordate, simple or three or five-lobed; acuminate, irregularly dentate, smooth, sometimes arachnoideo-villous beneath; the nerves and veins always furnished with a rufous pubescence. Racemes small, berries large, .8 of an inch in diameter, green, a little glaucous, disagreeably acid.

3. *V. ÆSTIVALIS*. Foliis lato-cordatis sublobato-angulatis, tri vel quinquelobis, acuminatis irregulariter serratis aut dentatis, dentibus mucronatis, supra glabris aut paulo arachnoides, subtus arachnoideo-villosis plus minus fuscis, interdum subglabris, junioribus, densius villosis. Racemis parvis, baccis parvulis nigris acidis.

Hab.—In Carolina and Georgia. *V. æstivalis*, Michaux and Rafinesque. *V. labrusca*, Walter and Elliott. Vulg. Fox grape.

Stem large and lofty; leaves widely cordate, sublobately angled, sometimes distinctly and deeply three and five lobed; acuminate irregularly dentate or serrate, with the teeth mucronate, above smooth or a little archnoidal, especially in the younger state, beneath more or less fuscous, arachnoideo-villous, sometimes, subglabrous, the youngest one more densely villous. Racemes rather small; berries rather small, .4 of an inch in diameter, black, generally very acid.

These three species have a general resemblance to each other, but, as appears from the descriptions, are sufficiently distinct.

4. *V. BRACTEATA*. Foliis cordatis, acuminatis, quinquelobis, sinu-bis latis profundis, irregulariter dentatis dentibus acutis muticis, supra glabris, subtus nervis rufo-pubescentibus. Florum fasciculis bracteatis. Racemis longis compositis laxis, baccis parvis nigris.

Hab.—In Carolina and Georgia in swamps. *V. bracteata*, Raf. *V. æstivalis*, Elliot. Vulg. Duck shot or Swamp grape.

Stem very large, climbing to the tops of the loftiest trees; leaves broad-cordate, acuminate, five-lobed, sinuses wide and deep, the lobes irregularly dentate; the teeth without any mucronate point, above smooth, beneath with the nerves rufo-pubescent. Fascicles of the flowers with a short leaf or bract at the base of each; racemes long, loose, and compound; berries very small, $\cdot 15$ of an inch in diameter, very acid.

5. *V. vulpina*. Foliis glabris, cordatis acuminatis, simplicibus, trilobis, aut interdum profunde quinquelobis, dentatis, dentibus subabrupte-acuminatis, subtus plus minus sparse villosiusculis aut etiam glabris. Racemis densis baccis parvis.

Hab.—In the Northern and Middle States. *V. vulpina* Willd. *V. æstivalis*, Emerson's rep. on the Trees, &c., of Mass. *V. cordifolia* of many authors, but not of Michaux. *V. callosa*, hyemalis, *cordifolia*, Raf. Vulg. Winter grape.

Stem moderately large, very branching, the younger shoots for the most part purplish. Leaves always smooth above, and generally so on both sides; beneath sometimes, particularly in the younger ones, a little villous; cordate acuminate dentate, the teeth abruptly acuminate, always more or less tri-lobate, sometimes profoundly so, and often five-lobed. Racemes tolerably large, very dense, so as even to change the form of the berries; berries $\cdot 35$ of an inch in diameter, black, acid.

The name of *cordifolia* is occasionally given improperly to another species, the *V. rotundifolia* Mx. Willdenow's description is not very full, but sufficiently so to remove all doubt of his meaning this species; there is no other so well deserving the name of *Vulpina*, as the grapes have a strong smell much resembling that of a fox.

The older leaves are without any villosity beneath except on the nerves, which with the veins are very prominent. They frequently become glaucous beneath.

(Conclusion next month.)

For the Florist and Horticultural Journal.

ROSEDALE NURSERIES, APRIL 8, 1853.

Dear Sir—I have thought that a few hints to your readers on the subject of the culture of pears might be opportune at this season, when many of them no doubt have planted from one to hundreds. Nurserymen (including your humble servant) say that it has been a season of unprecedented demand for *dwarf Pears*. The French nurserymen also feel its effects, and rejoice that their grounds have been all cleared of good, bad and indifferent for America, where everything foreign takes admirably.

DWARF PEARS.—This term has lead to the impression that all trees are dwarfs that are grafted on the quince stock ; we do not incline to this term from the fact that we cultivated dwarf Pears before we knew of the effects of the pear on the quince, and also from the fact that we now have very fine *standard* trees with stems 6 and 7 feet clear that are on the Quince stock. You will therefore allow me to say in a few words without regard to the preconceived ideas of others what effects the quince stock has on the constitution of the pear, and what congeniality there is between their constitutions. The Pear, Apple, Quince, Hawthorn and Mountain Ash, all belong to the same class and order, and will grow if grafted on each other; they do not all however assimilate well with each other, for we find that there are some apples that will not grow on the pear, and vice-versa; there are also pears, and not a few, that will not grow on the quince; others that grow well, but their fruits are inferior; whilst again many are greatly improved on the quince. To enter into a detail of these facts is not at present our intention though we may have a word on the subject on some future occasion. We now say that the Pear, to be successful on the quince stock, must be very highly cultivated with enriching manures of almost any description incorporated with the surface soil, and frequently stirred during the growing season, repeating the enriching material and thorough culture every season. They can be planted from 10 to 15 feet apart, and will with such treatment give a very abundant crop, even a bushel from a tree only a few years planted. This is not, however, the only attention they require—they must have a *summer* pruning and a *winter* pruning, which you shall have in another chapter.

Again, the Quince stock is a very general term; there is a vast difference in the *kind* of quince, and it is now very strange that all the pears on the Quince, whether worked thereon the past year or ten years, are on what has recently been called to the peculiar benefit of some, the Angiers Quince. Certain it is, that there is a variety aptly adapted to the vigor of the pear more generally known to the experienced eye by its growth as that variety, and we think it is *the* variety only that demands particular notice. The growth is clean and luxuriant, bark smooth and free, making shoots 6 feet high in a season, readily propagated from cuttings, and even budded the first season; these very desirable peculiarities have enhanced the value two per cent. within the past two years of this variety in France, and they are now very chary of parting with it, as those nurserymen who have ordered their supply from abroad the past season will perhaps ere this be aware of the usual supply being eagerly absorbed by the local demand.

Every cutting therefore, of that variety, should be carefully planted on which you may grow either *dwarfs* or *standards*, with this result that the sorts of pear worked thereon will come into bearing in two or three years, and continue productive for many years, say half a century, and be more free from blight than if on the pear stock, which roots deep, descends into the cold ground perpendicularly, predisposes the tree to blight during summer, and if not blight, produces a redundancy of wood almost beyond practical management and not at all adapted for gardens. Another point in favor of the quince stock I might refer to, is the certainty of its growth after being removed and conveyed to a distance, the many fibres close to the bole of the tree rending its growth almost certain, at least 49 out of 50. The pear on its own stock makes few fibres, and is more precarious in removal and carriage; this is again partially under control by frequent removals in the nursery when the trees are young, which checks their growth of wood, produces early fruiting properties, so that we hope to live to see dwarf fruiting pears on the pear stock as eagerly sought for as those now on the Angiers quince—you will please make a note of this assertion. We are now deluged with names of new pears regardless of their

qualities, that will take many years to extirpate; we cannot avoid growing them and selling them, the public require it and will have their own choice. Although they say, select *for me*, their own taste must be suited, you take them to trees of the OTT pear in the vicinity of *Belle Dumas* or *Souvenir de printemps*, you advise the former, but they prefer the latter; they have *so fine, thrifty growth*, in quality you may as well compare persimmons to seckel pears, or a sous to a sovereign. One word more in budding the pear on the quince, the closer to the ground it is inserted the better, that on its being transplanted the stem of the pear may be partially under the surface; if this is not the case and a portion of the stock above ground, it is advisable to plant the whole of the quince beneath the surface, or to draw up soil to it—keep the soil rich, dig or plough deep, and you may dispense with *my pear preparation*. It is only 5 or at most 10 years ago since all the offal of the slaughter house was requisite to grow grapes—the *idea*! but now cautious and cool heads have subdued that mania; amongst them is your correspondent Chorlton, who proves what can be done by what he has done; so it is with all ideal preparations, nature hands out bountifully the material in loam, sand and decomposed vegetable matter which is under the control of every reader of your journal.

Yours Truly, R. BUIST.

MR. EDITOR—So many things have been offered for sale that have proved worthless, that it makes one doubt everything new; but the “Lover of Roses” in your last number may come to the conclusion that the Augusta Rose is a fine acquisition to the Noisette family; it is a free bloomer of a good color, and withal as sweet as any Tea rose. Its foliage is remarkably fine, and it no doubt will stand the severity of our winters. I had seen the bloom in 1851, and have now a plant in my possession blooming, and it proves fully equal to what has been said about it. Being of American origin, I wish its introduction on that account; and such a beginning may lead us to as many choice varieties in this family as there are in the Camellia. Of this latter we can be proud in Baltimore, and can compare with all Europe and America. Persevere and encourage the raising of

all kinds of seedlings, then we shall have plenty without importing so much trash, or copying from foreign journals to fill our own pages.

JOHN FEAST, Baltimore.

As to the Augusta rose, we saw it at Mr. Fulton's nursery last week, but the bloom was rather far gone; it seemed much like *Le Pactole*, but larger. The general opinion seems to be that it is not sufficiently distinct from *Chromatella* for a new name; whether it be more hardy remains to be proven.

There is no doubt that as good seedlings can be raised here as anywhere—there certainly have been as good *Camellias*; nevertheless, an interchange of plants as well as of ideas is very useful in most cases.—ED.

WINDOW AND YARD GARDENING.

As soon as the warm breezes of spring begin to refresh the earth and incite in us anticipations of genial summer, every occupier of a rod of ground, (it is hoped) turns attention to having things "fixed up." Flower-beds and shrubbery borders undergo their annual refreshment; if not done in the fall (which is the most proper season) they should now be turned over with a fork, a much better implement for this purpose than the spade, which cuts and injures roots. Leave the surface as rough as possible, and on no account rake it over; the first heavy shower that falls will beat it level enough. It is one of the principal points in good culture to keep the ground open and well stirred on the surface, that both air and water may find ready access to the roots of plants. A smoothly raked surface may look very pretty, and please the eye at the time, but it is not indicative of good cultivation. Herbaceous plants, as *Chrysanthemums*, *Phlox*, &c., that have got large will flower better by being divided and reset. There is great want of flowering plants and shrubbery in yards, such plants as *Spirea prunifolia*, *Weigela Rosea*, *Forsythia viridissima*, *Spiræa Reevesii*, &c., should be in every border, as suitable companions to the early flowering *Narcissus* and *Hyacinths*.

Fuchsias—that have been wintered in the cellar should now be looked to; place them in a light situation and give them a good watering to moisten all the soil thoroughly; when they begin to grow prune out all decayed branches and repot them in fresh soil, mixing it with a portion of charcoal; this substance keeps the soil from baking hard in the pots and in conjunction with good drainage maintains a healthy medium for roots.

Annuals. The cultivation of these have of late been somewhat superseded by plants of a more permanent nature, as Verbenas, Salvias, Petunias and such like. There are many persons that have no accommodations for keeping them over winter, such must have recourse to annuals for a summer display of flowers, and a very pretty display they make; they may be sown at once where they are wanted, or, a surer method is to select a sheltered spot of ground, dig it thoroughly and sow the seed in slight drills; if you have a spare sash of glass to lay over them and prevent heavy rains from beating the soil, they will come up sooner; where there is no such convenience a sprinkling of loose litter of any description will answer the same purpose, taking care to remove it on the first appearance of vegetation, thin them out where too thick, and transplant them to the borders at a favorable raining opportunity.

Geraniums coming into flower will require attention; stake them out and give them enough water, do not keep them *saturated*, neither must they droop for want of it, a medium between the two extremes must be maintained, otherwise the flowers will suffer.

Dahlias will now be starting into growth, they may be planted out, although it is rather early; a few inches of manure over the tops will preserve them from slight frosts.

Camellias and Azaleas that are growing should not be subjected to cold currents of air until their growth is matured; about the end of June is soon enough to place them out of doors; ignore that system of setting every thing out of doors on the first appearance of fine weather. Plants, although comparatively hardy, will receive a severe check by being suddenly removed into the open air while growing; even an oak tree would suffer from such treatment. As the growths approach maturity they will set flower buds more certainly by being placed out in the open air; attention to this par-

ticular would in many instances be productive of gratifying improvements, both in the quantity and quality of flowers.

Chinese Primroses.—It is sometimes a matter of difficulty to get seed from these; select the best plants, thin out the flower stems, stake securely those that are left, and set them out in the sun, attend carefully in supplying them with water, under these conditions they will be likely to mature plenty of seed. D. D.

GARDEN MEMORANDA.

MR. EDITOR.—A few days ago, having an hour or two to spare in West Philadelphia, I called at two of the principal gardening establishments there, those of Mr. J. F. Knorr, and of Mr. W. W. Keen. Being rather in your own neighborhood, I was surprised to find so many things worthy of note with which the readers of the "Florist" are unacquainted. You will, I hope, pardon me for the attempt to drag out the light from under your bushel.

The former gentleman's establishment is anything but an extensive one; the ground occupied by it is perhaps under an acre; it has a small greenhouse, hothouse, propagating house, and rose house. In these there are probably congregated a greater stock of valuable novelties than in any similar space in the Union. The hothouse contains many choice Orchideæ, among which I noticed the rare *Dendrobium Dalhousianum* and *Cambridgeanum*. There were probably ten or a dozen species of *Œschynanthus*, *Æ. albidus* being in flower; its white fringed corolla gives it a very distinct character, but it will be generally thought inferior in gaiety to many other kinds. The very rare and valuable *Medinilla magnifica* had two of its large clusters of flowers far advanced towards expansion; *Nematanthus Morrellianus* was also in bloom, the flower has a purplish tinge, though in other respects resembling *N. longipes*.

In the greenhouse *Bignonia picta*, a very well-grown specimen, was in flower; the corolla is large, white, thickly set with purple lines; it will make a favorite climber for a warm greenhouse. *Jasminum gracile*, an old but not much known species, with profuse white flowers and small privet-like leaves, was abundantly set with flower, &c. Here also was a very fine *Campanula Vidalii*, looking more like a shrubby *Cotyledon* or *Crassula* than a member of the bell flower fraternity. A very choice assortment of the newest *Cinerarias* were in bloom, and afforded an illustration of the great progress in beauty this pet plant is making; they were all mostly two-colored, with petals broad, and the whole flower forming a perfectly circular outline. I took Adela Villiers, Mrs. Sydney Herbert, and Vicar of Wakefield as three

of the most superior and distinct. I must remark that I think these English varieties though in breadth of petal, regularity of outline and distinct marking of the colors superior to any of our seedlings, are yet far behind us in size, and I have no doubt a little attention from our florists in selecting seed from flowers having good breeding qualities, would be rewarded by something superior.

In one part of this house were some *Ericas*; they were of the more difficult kinds of growth, as *Ampullacea*, *Aristata*, and *Ventricosa*; they were remarkably healthy in appearance. The gardener, Mr. Bell, intends to lend his share of experience in deciding the unsatisfactory question whether *Heaths* can or cannot be successfully grown in America. Under the stage, in the shade, was a box of the Southern *Sarracenia Drummondii*, blooming as happily as if in its native bogs; and in the same curious company I saw our own *Goodyera pubescens*. In another small house there was a fine stock of that new candidate for popular favor the English Daisy.

When it is recollected how very lately this gentleman has turned his attention to floriculture, it may excite surprise at the richness of his collection. I will end by expressing the hope that the pleasure and gratification the pursuit has already afforded him may increase till it warrants his establishment to be in extension what it already is in richness.

W. W. Keen's is another establishment which has grown up within the last few years. Commencing with a few window plants, then the small garden, till a small greenhouse was born, Mr. Keen was his own gardener. This *practical* love of Horticulture is the surest foundation for a lasting source of pleasure in its pursuit. Mr. Keen's establishment has overgrown his individual care, and for some time past has been under the management of Mr. Wm. Grassie, and I am sure with an increase of pleasure to the proprietor as well as of profit to our profession. The order and neatness which pervades all parts—the health and beauty of the plants, and their variety and rarity, contrast singularly with things as seen by the writer two years ago, when at the kind invitation of Mr. Keen he paid his first visit there. They were creditable then; now they will rank with any establishment near the city. A *Bletia Tankervilleæ*, with fine spikes of flowers, was a pretty object; a *Begonia coccinea*, above two feet high and nearly as thick, was covered with bloom, and was the prettiest looking *Begonia* I had ever seen; a *Chorozema cordata* was past its best, also above two feet high and wide—it appears to have borne flower spikes this season by the hundred. An *Erica Bowiciana*, two feet high and about twenty inches thick, covered with its waxy flowers, was “an object.” A specimen of the new *Azalea “exquisita,”* above a foot high and as wide, covered with its pinky-white feathery flowers, was a gem. The much neglected *Mimulus* would rise in anybody's es-

teem who could see it under Mr. Grassie's hands, embodied as "Jupiter."—In a small house devoted to Orchids and stove plants, a specimen of the *Hoya imperialis* was very nearly in bloom. This was of the downy variety. At the south end or aspect of the garden a Vinery has been constructed of perhaps 50 feet—amongst other unmistakeable signs of improvements. Mr. K. is an enthusiastic lover of bees, and is perhaps the most successful keeper in Philadelphia; his boxes are of the most perfect construction, being, I believe, patented by him. This department is by no means the least interesting feature of this pretty establishment.

A. M. EASTWICK'S, OF BARTRAM.

One hundred and fifty years ago this memorable spot was occupied by a Swede; the only memorial of whose existence at the present time, is an old Windsor or Bell Pear near one of the outbuildings. It was the ambition of his successor Bartram to make his garden the repository of everything that could be obtained—under his son William, and the latter's son-in-law, Colonel Carr, the collection continued to increase till the collection of hardy trees became unequalled by any in the union. In 1850 the estate fell into the hands of A. M. Eastwick; it must be highly interesting to every citizen who prides himself on the lustre the name of Bartram has shed on the scientific character of his country to learn with what care the present proprietor endeavours to preserve every memento that has reference to his illustrious predecessor. The alterations which have been made in the old garden in the shape of walks, retreats, groves and flower gardens, have been effected without the removal or injury of a single tree. The ideas of the improver were made to suit the trees and the ground, for the preservation of everything possible. Thus the famed old cypress still stands though its natural grandeur has been eclipsed by the beauties of art—on taking the height and circumference of this tree I found it to be 20 feet for the latter, and 137 the former. The large *Magnolia acuminata*, 7 feet in circumference 80 feet high, *Pinus Mitis* 5 feet 8 inches, 90 feet high—Silver Fir, 6 feet, 95 feet high—English buttonwood 4 feet, 90 feet—Yellow Buckeye, 7 feet 1 inch, 120 feet high—*Quercus heterophylla* 6 feet, 70 feet high—*Q. alba*, 13 feet and 5 feet high—British oak, *pedunculata*, 7 feet and 3 feet high—*Q. macrocarpa*, 6 feet 9 inches, 62 feet high—*Q. lyrata*, 6 feet 2 inches, 60 feet high—*Salisburia*, 3 feet 8 inches, 61 feet high—Hemlock spruce, 8 feet 4 inches, 94 feet high—*Abies excelsa*, 7 feet 2 inches, 120 feet high—Variegated box, 2 feet 8 inches, 36 feet high—a chinquapin, 2 feet 11 inches, 25 feet high—Pecan nut, 5 feet 7 inches, 91 feet high,—these were amongst scores of others equally as interesting—much has been done to improve the appearance of the new part surrounding the mansion, by planting walks, terraces and drives, with good effect, and the praiseworthy efforts of Mr. E. in draining the marshes in the neighborhood have so far been attended by success as to considerable increase the salubrity and value of surrounding property.

CALENDAR OF OPERATIONS.

FRUIT.

GRAPES.—Among the various systems of training and pruning grapes it seems there are scarcely two authorities alike. This is much to be regretted, and arises chiefly from the fact that the grape *will* produce more or less under any system of management, consequently those who make a first essay, if they can procure even a miserable crop, are so overjoyed with their success that they extol it to the skies, and chronicle their great success as proceeding from some trifling circumstance or other, which is henceforth considered indispensable. "These grape vines will never do any good, because they are planted inside the house," was a remark made in our hearing by one who wished to be considered an authority in these matters, having planted a few acres of vineyard. "You leave your young wood too long for the first year," says another, who reads in the books that vines should not be allowed to fruit until the third year after planting, overlooking the fact that a well managed plant will be in better condition for fruiting in its second year than a neglected one in its fourth. We have heard remarks similar to the above made in cases reminding one of the commissioned officer of six months' standing, instructing the private veteran of many battles how to handle his musket. We propose to offer a few remarks upon the various systems of pruning alluded to in a former number; and before proceeding to details a few preliminary remarks will be necessary.

When a seed germinates, its first effort is to lengthen downwards into the soil and upwards into the air; the starch contained in the seed affords sufficient nourishment for this process. The plant being now formed will henceforth derive its food from the air and soil, the young roots immediately begin to absorb nutriment from the earth, which passes into the stem and leaves, where it undergoes decomposition, is then returned downwards to the roots, extending their formation. The carbonic acid and other matters that enter the system of the plant through the roots, are of no value until decomposed by the leaves. This relative action continues during the growth of the plant, the increase in size, the quantity of its secretions and extension of roots are the result either of immediate or previous elaborating functions of foliage.

Such is the generally recognised process of vegetable growth. Leaves are the principal agents; any system of pruning, therefore, that involves their removal must exercise a corresponding check of root growth; and if these principles are kept in view, we shall be better able to discuss the merits of pruning in all its modifications.

The spur system of pruning is advocated and practised by many at the present time. This may arise from its simplicity, certainly not from any physiological superiority it possesses. According to this method, a single

shoot is encouraged until it reaches the desired length, the bearing shoots proceeding at intervals in its length, these shoots being annually pruned down to one eye or bud from which the shoot bearing the future crop proceeds.—During growth the points of these shoots are pinched out at one or two leaves beyond the fruit, and all future efforts at growth are watchfully removed. This is done in order to concentrate the sap and fill up the lower eyes, with a view also of benefitting the present crops; for the same reason the leading shoot is likewise prevented from extending. The whole system involves a continual suppression of growth, and as a natural consequence the roots are also checked, they cease to extend, become more woody at the extremities and lose their power of absorption. A young plant strongly established in a well prepared border, will continue in health and productiveness for several years under this treatment, but they are gradually weakened and fail to burst into growth with that vigor which they did in their early days. We think this statement will be endorsed by all experienced grape growers who have practised the system. This subject will be continued next month.

STRAWBERRIES.—In preparing ground for a plantation, deep working and manuring is the first consideration; no plant repays extra care more certainly than the Strawberry, and perhaps there is none less satisfactory under poor treatment. It has proved that the finest Pine Strawberries of Europe can be raised in equal perfection in this climate, if properly cultivated.—Deep rich soil, and mulching in dry weather is all that is required. Notwithstanding that much has been said about their sexual character, many good cultivators pay no attention to the matter. The young plants will strike root readily at this season, and if the soil is stirred frequently and mulched when dry weather comes on, they will establish themselves well, and produce a heavy crop the following season.

PEARS.—Those grafted on the quince require a deep, rich soil to attain their greatest perfection. There is no more pleasing occupation for the amateur in fruits than attending to a collection of dwarf Pear trees. Having in his eye the symmetrical proportions of a pyramidal-formed tree clothed with foliage from the ground upwards, he will now be bending down strong shoots and elevating weak ones, to equalize their conditions; and as growth advances those shoots likely to take a lead and disarrange the equality of growth, will have their extremities pinched out. At present, appearances indicate a profusion of blossoms, the flower buds being more than usually prominent, occasioned, no doubt, by the protracted, although not severe winter just passed.

S. B.

APRIL—MAY.

HOUSE GARDEN.—The turning out of plants into the beds and borders is the thing now to be attended to. Plants should not be taken out at once, from the shade and moisture of their winter to the sudden extremes of the open air; it is better to place them for a few weeks in a frame where they may be protected if necessary for a few days, or placed somewhere out of doors in a sheltered spot; the hardiest kind will of course set out first, the tenderest following. In planting for masses, the plants should be set in thickly. All annuals not yet sown should be done at once—the second week in May will be time enough for for such tender annuals as *Thunbergia*, *Cypress Vine*, and *amaranthus*—the seeds of the white cypress vine should be sown with the crimson for effect—some very pretty effects are often obtained from this plant trained on fancy trellises—annuals or other seeds that have been forwarded in a slight hotbed or under protection, should be set out whenever a shower affords an opportunity. Where it is desirable to have a mass of flowers in some shady places, the *Hydrangea* or *Hortensia* answers admirably, continuing in beauty the whole season. I have seen a bed of the *English Ivy* in such deep shade with a singularly pleasing effect—there are not many plants that will thrive in such situations, and what will should be prized—as a vine for shady spots there is nothing superior to the *Bignonia capreolata* or *Golden Trumpet vine*—clothed with brilliant flowers in summer, and maintaining its verdure the year round—*Gladioluses* are deservedly increasing in favour. A number of new varieties have been lately added to collections; they like a rich loam, rather moist, where *Hyacinths* or *Tulips* were planted in beds in the flower garden in the fall, and are now coming into bloom—they may be planted with a dibble or trowel in the spaces between them, so that in a few weeks after the former have done blooming, the latter will come in, maintaining the interest through the whole season. The *Tuberose* and *Tigridia* or tiger flower may be done the same way—Moles and ground Mice make sad havoc amongst these roots—a lump of tow dipped in gas tar and sunk a few inches in the soil in the neighborhood of the roots, will make the marauders shy of coming about. Whenever the ground “cakes,” after a rain, the ground should be lightened with a hoe and rake, it mixes the air with the surface soil, and as that is a non-conductor, it prevents the soil from losing so much moisture by evaporation, or of becoming so hot and hard as it otherwise would.

The lawns should be mown as soon as ever it is long enough to bear the scythe, if a continuous “green carpet” be desired; when suffered to grow long before the first cutting, a face of brown stumps are left which shows at every successive mowing.

GREENHOUSE. To turn all the plants out in "the first week in May," without reference to any contingency—this should not be; all plants should be gradually inured to the open air—the ventilators and sashes should be kept open as much as possible, yet by degrees—sudden changes of temperature engender mildew, and a species of consumption fatal to many plants—the hardiest things should be placed out first, in a somewhat shaded spot, and if possible on a bottom of coal ashes to keep out worms—Azaleas and Rhododendrons, Daphnes and Camellias may go out when their growth is finished—no spot will be too shaded, provided they can get an abundance of air all around. If plants are well rooted, and have not been repotted, they should be so before setting out, as they will, otherwise, suffer at times for want of water. It is objectionable to turn out everything, leaving the greenhouse for the season like a lumber loft—such as will stay in advantageously should be left, and the idea is becoming prevalent that cape and hard wooded things are better in than out.

Abutilons, Habrothamnuses, and Cestrums, indeed many similar plants, if taken out of their pots, turned out into the open border, and lifted and repotted early in the fall will make fine growths and do well—as fast as Hyacinths in pots are done flowering, turn them out into beds as recommended last month—Calceolarias should be kept in the coolest part of the house, and have a good supply of water, they frequently die after flowering—cuttings of desirable kinds should be taken from them now, and if they show signs of flowering before fall, dont allow it—Cinerarias should receive the same attention, as they also die out after flowering—as soon as the Chrysanthemums, planted out as recommended last month have shot forth, take cuttings for next season's show—they strike very readily in sandy soil, in a somewhat moist and shady situation—Dahlias need not be put out before the second or third week in May—they do not like the scorching heat of summer, and if put out early become stunted and do not flower till later. Pelargoniums should have all the light possible till they begin to open their flower buds, when they should be somewhat shaded and kept cool; by this the flowers are rendered finer, and last longer—Everblooming roses, grown in pots, should be pruned in a little after their first flowering, kept a little drier for a week or so, then repotted, and place where desired out of doors—they delight in a rich loamy soil, and are benefitted by manure water while growing; those who have not a collection should begin—there is no finer class; six of the best for pot culture may be *Souvenir de la malmaison*, salmon white; *Devoniensis*, pale lemon; *Hermosa*, rose; *Agrippina*, crimson; *Lyonnais*, pink; and as a free blooming white, *Cels*.

HOT HOUSE—Justicias, Aphelandras, and Acanthaceous plants, which have been the mainspring of beauty in this department most of the winter and spring, and have now done flowering, should have the lightest and driest part of the house, to ripen well their wood, preparatory to being cut back and repotted for next season's flowering. The Achimenes and Gloxinia will be coming on to take their places, their cultivation has been detailed in a former number of the journal—they like a moist heat circulating amongst their roots, and do well with much rough material in the soil. Pentas carnea, or similar soft wooded plants grown for flowering early in the fall, may be still repotted if the pots become filled with roots—as the weather becomes warm shade the house a little to keep the sun from scorching. I like to see all plants under glass have a slight shade in summer time—water in the morning, keep the syringe going in the evening, keep the temperature regular, between 60 and 70°, and all will go well.

VEGETABLE GARDEN.—Tomatoes, Egg Plants and Peppers, raised under glass and gradually inured to the open air, may be put out early in the month. For the two last prepare a sandier soil than the former. Lima Beans are also fond of a light soil; they frequently fail from being put in too early in May, planting the beans too deep, or the stiffness of the soil preventing their coming through easily—guard against these. Bush or string Beans also require attention; the Valentine is the earliest, the Six Week nearly as early but more productive; and the White Royal Dwarf the best for a crop of beans for winter use. The main crop of Carrots and Beets may go in at this time. Early in the month a few dozen of the Stowell Corn may be sown for table use, which should be repeated as often as each sowing appears above the ground. So also with Peas, Radishes, Lettuces, &c., of which a succession is desired. Cucumbers, Cantalopes, Melons, and Okra may be sown about the third week in the month—the former in light rich soil, the three latter prefer a rich firm loam. Many plant Squash seed in their potato rows; I prefer them by themselves—they too like a very rich loam. If a few large Pumpkins are desired, they may be planted in the rows of Lima Beans—feeding on different elements, they do not interfere with that crop. Some of the fall crops must be looked after—Drumhead Cabbage, Purple Brocoli, White Cape, Eranges white, and some Walcheren Brocoli, may be sown in a bed of light soil. Also, the main crop of Celery, and some curled Endive in a similar situation. Wherever Asparagus is used for forcing, a bed of seed should be sown every year to keep up the supply. Hoeing and weeding of all crops should be attended to early, for the benefit they receive from loosening of the soil as well as to save much after labor in eradicating weeds.

T. J.

BOOK NOTICES.

THE PRINCIPLES OF BOTANY, as exemplified in the Cryptogamia; for the use of Schools and Colleges, by Harland Coultas. Lindsay & Blackiston, Philada. 1853. pp. 94.

The issue from the Philadelphia press of a book on Botany, and an original book, too, is such a novelty that we are ready to hail with satisfaction the appearance of any work on the subject. The last we remember was a Catechism about the size of a primer by Mr. Samuel Gummere. Whether that be out of print or not we cannot say, but certainly the time has come for something better, and so we presume thought Mr. Coultas, for he has given us something not only wonderfully superior without, but within, introducing another world—we would say a world of *minute* beauty, were beauty capable of being thus qualified. That Catechism and this Class-book contrast well the present with the past, and argue hopefully for the demands of the science in the future.

The study of the vegetable kingdom through the (so called) lower tribes of plants is the *idea* which would seem to have suggested the book before us. These humble beings we have around us at all seasons. Regarding them as the type of the vegetable creation, the study of the laws of their development and growth will lead to the comprehension of the more complex forces which are at work in the grander and more gorgeous botanical productions. Thus, in his introduction, page x. our author says: "The study of the simpler plants ought to take the precedence of those whose organization is more complex and intricate, as being the simplest expression of the laws of vegetable life." This proposition which we presume none will deny who are at all conversant with the present condition and tendency of the science of Botany, was also recognized by the illustrious Jussieu himself. In his study of plants under the then grand divisions of Acotyledons, Monocotyledons and Dicotyledons, he commences with the Algæ and closes with the Compositæ, the flowers of which, to him, present the most perfect transformation of the prototype leaf.

The one-ness of vegetable development is thus stated, p. 49: "The little bread mould which nature constructs from decaying organic matter in a few short hours, consisting of a few united vegetative cells and a single terminal reproductive cell, is only a simpler expression of the same law which operates in the production of the forest tree. The extent of all development in forest trees and flowering plants is alone different—the phenomena themselves are precisely analogous. In forest trees and flowering plants, the vegetative cells as they develop in countless millions, assume distinct organic parts, as root, stem and leaves, whilst the reproductive cells are seen in the form of beautiful and highly organized flowers. In the bread mould all such distinc-

tions vanish, and the organization of the parts is reduced to the utmost degree of simplicity."

In introducing his readers to the study of Botany through the Cryptogamia, our author considers first the laws of growth, multiplication and transformation of cells; and in his second part, the sea weeds, lichens, liverworts, mosses, club mosses, ferns and equisetæ successively. At the close he expresses his hope of completing the work at some future time by adding the laws of the development of flowering plants. We hope that he may be encouraged by the friends of Flora so to do, and in the same excellent style in which the present is got up. The illustrations are numerous and well-selected, and of the typography it is sufficient to say that our esteemed friends, Messrs. T. K. & P. G. Collins are the printers. A. L. K.

THE COLD GRAPERY. By Wm. Chorlton; New York, J. C. Riker, 129 Fulton street.

This little manual, being notes from "direct American practice," fully sustains the reputation as a practical, common-sense grape grower which Mr. Chorlton has already established for himself by his articles in the "Horticulturist," and other Magazines. It is a plain subject plainly treated, freed from the quackery of the past fifteen years.

The construction of houses—an important part of all plant growing—occupies a chapter. The double pitch curvilinear roof is thought the best by the majority of growers. The ridge and furrow roof house is recommended by the writer of our calendar, (one of the very best authorities on this subject in the country,) at page 384 of the last volume, and we have no doubt will, in some situation, be the best adapted.

The raised borders treated of at page 33, are a decided improvement on the old style, and the use of the base (original would be better) soil, is not only a great saving of expense, but equally as good as hauling it away and often returning worse.

In West's St. Peter's grape we find what we were desirous to know, namely, what the Bostonians called the Poonah grape. There is a difference of opinion as to the identity of the Black Prince and Cambridge Botanic Garden grapes. Mr. C. describes what we know by the latter name. We give the names of the best twelve sorts recommended by him.

Victoria, and Old Black Hamburg, Chasselas Fontainebleau, Malvasia, Muscat Blanc Hatif, West's St. Peters, Grizzly and White Frontignan, Black Prince, Muscat of Alexandria, Dutch Sweetwater, and Zinfindal.

Here are a few sentences worth remembering: "At all times, with a clear sun in the morning, ventilate as soon as the house begins to warm a little; and close early—the temperature by these means rises and falls gradually.

Nothing is worse in all plant culture than allowing a house to be closed until it becomes hot, and admitting at once a great quantity of cold air. In grape growing it leads to the most baneful results."

After a careful reading of this work, we can recommend it to all as a most useful and reliable one, and its author is entitled to the thanks of all amateurs.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this society was held on Tuesday evening, in the Chinese Saloon, Dr. W. D. Brinckle, Vice President, in the chair. The display was unusually rich, and the Hall crowded with gratified visitors. The extensive tables of the society were completely covered with the many beautiful objects of exhibition. The imposing show of blooming plants was contributed from more than a dozen green-houses, and presented one of the finest ever seen at a monthly meeting. Robert Buist's foreman brought a great number of interesting and rare specimens, several of which were new and shown for the first time. *Rhododendron javanicum*, a beautiful species, with flowers of an orange hue; *Gastrolobium Drummondii*, *Dendrobium Blandfordianum*, *Zieria trifoliata*, *Tetranthera Hugelii*, and *Ceanothus rigidus*. Of standard plants, were a splendid specimen of *Pimelia spectabilis*, displaying innumerable trusses of flowers, a large and graceful *Acacia pubescens*, a very fine *Cuphea platycentra*, a handsome *Spiræa Reevesii*, and a dozen of the choicest *Cinerarias* of merit; also a collection of indigenous plants in flower, very interesting. J. F. Knorr's gardener exhibited choice plants, which were not offered in competition. Of those shown for the first time, and new, were *Æschynanthus albidus*, *Azalea Reine des Belges* and *Delphinium Beauty of Charonne*, and fine *Cinerarias*, *Azaleas*, *Templetonia*, *glauca*, &c.

Caleb Cope's gardener presented new plants for the first time, shown in bloom—*Rhododendron Gibsonii*, *Pimelia Verschaffeltii*, *Lantana lilavina* *Mimulus* species raised from seed presented to the Society, from California, by Capt. W. McMichaels; and *Cineraria* seedlings; *Azalea Smithii*, a beautiful plant, with many more of the choicest specimens; *Camellia*, *A. J. Downing*, a seedling raised by N. J. Becar, Esq., of New York. From Thomas Richardson of New York, were beautiful plants—*Tropæolum tricolorum*, gracefully trained over wire in a globular form, in full bloom, a pretty object; *Pimelia spectabilis*, and twelve select *Cinerarias*. W. W. Keen's gardener of West Philadelphia, brought twelve handsome plants—*Euphorbia praeclara*, *Erica*, etc. Robert Scott exhibited a large collection not in competition, in which were some of the choicest *Roses*. Adam Uber, a table of very fine *Pelargoniums*. Benj. Gulliss, a large collection of seed-

ling Verbenas, &c.; also, twelve beautiful Roses. Charles Miller, a large table of *Calceolarias*. Peter Raabe, three large vases of Hyacinths, Tulips, and Narcissi; also, a fine display of seedling Pacquerettes, a dwarf Apple tree in profuse bloom. Moore & Warnick, Camden, a choice collection of plants. Robert Cornelius' gardener had a beautiful *Azalea indica* and *Mahernia odorata*. Martin Cundlach, a great number of Pansies. William Hobson, Cinerarias, Pansies and Auriculas. William Warnick, Camden, Pansies. H. Ingersoll's gardener, a specimen of *Dielytra spectabilis*. Robert Kilvington, specimens of three native plants, raised from seed brought by Dr. Hermann and Dr. Kern, of Ex. Expedition; *Claytonia perfoliata*—this species is used as a salad; *Penstemon Mariana* and *Nuttalia* sp. H. C. Hanson—shown for the first time, *Pinguicula lutea* and *Sarracenia Drummondii*. Capt. Marston a basket of dried Immortelles, &c., very pretty. Designs and Bouquets from several sources.

On the fruit tables were delicious Strawberries and Figs from Mr. Cope's conservatories. Pears and Apples from Mrs. J. B. Smith, and Apples from Robert Cornelius.

Of Vegetables, in Mr. Cornelius' display, were forced Potatoes, Cucumbers, Cauliflowers, &c. In Mr. Cope's, Asparagus, Pears, French Beans, Tomatoes, and other esculents.

Premiums awarded on the occasion were:

Roses—for the best 12 to Benj. Gulliss. Cinerarias—for the best, and for the second best six, to Thos. Fairley, foreman to R. Buist. Pansies—for the best and second best six to Martin Cundlach.

Plants in Pots—for the best 12 to T. Fairley; for the second best to Thos. Meehan, gr. to C. Cope; for the third best to W. Grassie, gr. to W. W. Keen. Plant in a Pot—for the best grown specimen (*Pimelia spectabilis*) to Thos. Fairley.

Indigenous Plants—for the best display to T. Fairley. Plants shown for the first time in bloom—a premium of \$3 to do; and another of \$2 to Thos. Meehan. Bouquet Design—for the best formed of cut flowers, to Thomas Meghran, gr. to R. Cornelius; for 2d best to T. Meehan. Basket formed of cut flowers—for the best to T. Meghran; for 2d best to T. Meehan; for the best formed of indigenous flowers to T. Meghran; and special premiums of \$2 each for a beautiful *Tropæolum tricolorum*, to Thomas Richardson's gardener. To Adam Uber for a display of *Pelargoniums*; to Chas. Miller, for a display of *Calceolarias*; and of \$1 each to Peter Raabe for a display of seedling *Pacquerettes*; and to B. Gullis for a collection of seedling *Verbenas*.

The committee notice a collection of *Gnaphaliums* from Capt. Marston; and two plants, *Pinguicula lutea* and *Sarracenia Drummondii* shown for the first time by H. C. Hanson.

Pears—for the best 10 specimens, St. Germain, to F. Guoin. Apples—for the best ten Newtown Pippin, to T. Meghran; and a special premium of \$2 for a dish of Hovey's Seedling Strawberries, and another of \$1 for two varieties of Figs to Thos. Meehan. Cucumbers—for the best brace, Cauliflowers for the best 3 heads, and Rhubarb for the best 12 stalks to Thomas Meghran. Sea Kale—for the best, and for the 2d best Rhubarb, to Thos. Meehan.

Display—For the best by a private gardener, to T. Meghran; for the 2d best to T. Meehan.

The committee notice and call the attention of the Society to a specimen of Hemp manufactured from the fibre of the Okra plant, which appears to possess remarkable strength and fineness of texture. It was shown by Ths. Dunlap. The usual *ad interim* report was submitted, describing a number of fine varieties of Apples.

T. P. JAMES, *Rec. Sec.*

MARYLAND AGRICULTURAL SOCIETY.

The first monthly exhibition of the Society, for the present year was held on the 4th inst., in the hall of the Maryland Institute; on this occasion there was a fine, although not a large display of plants and flowers. Mr. O. Kemp, gardener to Miss Tiffany, sent a showy collection of Cinerarias, chiefly seedlings, also a collection of Pansies, superior to anything heretofore exhibited before the society, the flowers above average size, of good shape and substance; it was quite refreshing to observe the result of skilful culture as applied to this beautiful tribe of plants.

A collection of the same by Mr. C. Campbell, gr. to Dr. Edmondson, were little inferior to the above and contributed much to the floral display: A flowering plant of the beautiful *Acacia pubescens*, and well grown plants of *Centradenia rosea*, *Gesnera oblongata*, *Begonia fuchsiodes*, &c., were shown in this collection; with Radishes, Mushrooms, and Lettuce, several heads of a new lettuce raised by Dr. Edmondson from seed, received especial notice, as being of a superior character for the table.

Messrs. S. Feast & Sons, contributed an extensive assortment of plants; in their collection several magnificent roses were conspicuous, especially Cloth of gold, Caroline de Sansal. Geant des Battailles, Victorine de Austerlitz, and Souvenir de la Malmaison; Camellias, Sarah Frost, *Hempsteadii*, and the Baltimore seedlings, Kurtz's Defiance, Feast's Perfection, Mary Troup, and Jenny Feast, well flowered specimens of *Geraniums*, *Azaleas*, *Verbenas*, *Petunias* and *Pelargoniums*. A novelty which attracted much

attention was a *Tropaeolum* named *Pulcherrimum*, a hybrid between *T. Lobbianum* and *Peregrinum*, a beautiful winter flowering greenhouse climbing plant. Several fine flowering plants of *Forsythia viridissima*, from the borders, were much admired. This early flowering hardy plant should be in every door yard.

In Mr. John Feast's collection of *Camellias* was a plant in flower of his fine seedling Mrs. Lurman, a beautiful mottled, imbricated flower; seedling *Cinerarias*, Fortune's yellow rose, *Burchelia capensis*, *Cytisus elegans*, (a beautiful and much neglected greenhouse plant) *Petunias*, *Verbenas*, and a large flowering plant of *Cactus Samphiroides* were also in this collection.

Messrs. Pentland, Greenmount Gardens, exhibited a few of their superb seedling *Verbenas*; these gentlemen have been eminently successful in the improvement of this now popular flower—several blooms of roses were noticed as fine, Pius 9th, Gen. Cavaignac, Louis Napoleon, Aurora di Guido, Madam Ami, Lodowski, and Madame Bosanquet, several bouquets were also in this collection.

Various contributions were sent by E. Kurtz, J. Galloway, E. Whittimore and others.

The following are the awards of the committees :

Camellias, 6 in pots, S. Feast & Sons; second, John Feast. *Rhododendrons*, John Feast. *Azaleas*, first, S. Feast & Sons; second, John Feast. *Roses*, first, S. Feast; second, Messrs. Pentland. *Cinerarias*, first John Feast; second, S. Feast & Son; do. amateurs, O. Kemp, gardener to Miss Tiffany. *Geraniums*, S. Feast & Sons. *Verbenas*, John Feast, second, S. Feast & Sons; do. amateurs, C. Campbell. *Stock gillies*, S. Feast & Sons. *Daisies*, do. *Pansies*, first, O. Kemp; second, C. Campbell, gardener to Dr. Edmondson. *Bouquet*, first, John Feast; second, Jas. Galloway; third, S. Feast. *Design*, Pentland, Bro. *Mushrooms*, W. Saunders gardener to T. Winans. *Lettuce*, E. Whittimore; do. amateurs, C. Campbell. *Radishes*, E. Whittimore.

W. SAUNDERS, *Cor. Secretary.*

TO CORRESPONDENTS. Our thanks are due to Mr. H. A. Dreer, for a package of Seed of German Summer Stock.

Catalogues received from B. M. Watson, Plymouth, Mass. W. R. Prince & Co., of *Flushing*; and R. Buist's Rose catalogue.

J. McD. Florida—No. 1 *Illicium floridanum*, No. 2 *Sarracenia flava*.

Mr. M. W. Contribution is crowded out by more valuable matter, besides which it is too near the subject of which we have had sufficient lately.

H. L. & Co. Turner's Florist has come to hand.



AESCHYNANTHUS PULCHER.

Institute of Design 194½ Spruce St.

Scale 1/2 inch.

THE FLORIST
AND HORTICULTURAL JOURNAL.

[No. 5.

ASCHYNANTHUS HER.

Gesneriaceæ & Scrophulariaceæ. — D. angiospermia.

CHARACT. GENER.— Calyx ventricosus, longe
partim, lobis aequalibus. Corolla tubulosa incurva,
lobis subellipticis. Stamina 4 antheris distinctis
longioribus antherarum multatis. Ovarium annulo
sericeo, filiformi, cingulato, integro depresso-concavo. O-
pacula acuminata, vix lobis distinctis, placentis bifidis bi-
lobis quasi 4-loculis. Semina nucosa minuta obliqua
longis paucis an solitariis appendiculata, funiculo multo
longiore. Stylus 5-lobus 5-fidus v. 5-
oblique subinaequaliter
serta cum rudimenti
formi basi cinctum.
Stylus filiformis elon-
gatus margine revo-
luto utrinque setis
longioribus multo bre-

S. strictus auct. *pseudoparasiticus*, adnates, a. l. us radiis
 11-15 ang. ut. auct. oris. Filis ppositis putabatur, auct. auct. e
 g. oris, pediculis terminatibus a. ut axillaris 1-2 ang. ut. auct.
 (maxime viridibus.)

DC. et Ind. Prodr. IX, 260. (Parenthesis only)

CHARACT. SPECIES.—*E. scandens*, Linn., *Fl. suec.* 1753, p. 60, f. 198.
venosus C. — *capite dentatis, corymbis terminalibus, calice corollae
 calycibus basi obtuso, segmentis brevibus*. — *Fl. danic.* 1754, p. 125.
 Linn. — Hoeg.

Eschynanthus pulcher ALP. DC. (1) Prodr. IX 211 1830

Frax. arbor. pumilum BLUME Bieg. 74. H. 20. 1. 20.

Among the various species of the genus *Aeschynanthus* which are now to be found in our greenhouses, none is more valuable than this, either in foliage or in flower. The deep green of the leaves and the graceful pendulous branches are alone an ornament; and when the long shoots are terminated by clusters of sometimes eight or ten flowers, the effect produced is very pleasing. This species is very like its congener, *A. Lobbianus*, but has a lighter colored and perfectly smooth calyx and a longer corolla. As the propagation of these plants is very easy, we hope to see them introduced to our collection. The species at present cultivated in this country are, *Aesch. pulcher*, *Lobbianus*, *Bescherianus*, *Javanicus*, *gigas*, *variegatus*, *speciosus*, *minutus* and *lanceolatus*. A hybrid has also been sent out in England by Messrs. Lee & Co., of Chelsea.



LEAFY FLOWERS

Leaves: "H2 Spruce"

THE FLORIST AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, May, 1853.

[No. 5.]

ÆSCHYNANTHUS PULCHER.

Gesneriaceæ & Cyrtandrea. — Didynamia-Angiospermia.

CHARACT. GENER.—Calyx ventricosus-tubulosus apice 5-lobus 5-fidus v. 5-partitus, lobis æqualibus. Corolla tubulosa incurva, limbo obliquo subinæqualiter 5-fido subbilabiato. Stamina 4 antherifera didynama sæpe exserta cum rudimenti quinti; loculis antherarum parallelis. Ovarium annulo cyathiformi basi cinctum. Stylus filiformis; stigmatе integro depresso-concavo. Capsula siliquæformis elongata acuminata, valvis duobus strictis, placentis bifidis bilamellatis margine revolutis quasi 4-locularis. Semina numerosa minuta obliqua pendula utrinque setis longis paucis aut solitariis appendiculata, funiculo nullo aut capillis multo breviorе.

Sufructicæ indici pseudoparasitici scandentes sæpius radicales, caulibus teretibus geniculatis glabris, foliis oppositis petiolatis carnosissimis integerrimis sæpissime glabris, pediculis terminalibus aut axillaribus 1-2-rarius plurifloris, corollis rubris (rariissime viridibus.)

DC. et Fil. Prodr. IX. 260. (Parentheses excepta.)

CHARACT. SPECIEI.—*Æ. scandens*, foliis ovatis coriaceo-carnosis immerge venosis obscure dentatis, corymbis terminalibus bracteatis, calyce ovato cylindraceo glabro basi obtuso, segmentis brevibus erectis, corolla calyce triplo longiore glabro. Hook.

Æschynanthus pulcher ALP. DC. (1) Prodr. IX. 262. Bot. Mag. t. 4264. 1846.
Trichoporum pulchrum BLUME Bijdr. 764. HASSK. Cat. bogor. 153.

Among the various species of the genus *Aeschynanthus* which are now to be found in our greenhouses, none is more valuable than this, either in foliage or in flower. The deep green of the leaves and the graceful pendulous branches are alone an ornament; and when the long shoots are terminated by clusters of sometimes eight or ten flowers, the effect produced is very pleasing. This species is very like its congener, *Æ. Lobbianus*, but has a lighter colored and perfectly smooth calyx and a longer corolla. As the propagation of these plants is very easy, we hope to see them introduced to every collection. The species at present cultivated in this country are, *Aesch. pulcher*, *Lobbianus*, *Boschianus*, *Javanicus*, *grandiflorus*, *ramosus*, *speciosus*, *miniatus* and *albidus*. A hybrid has been lately sent out in England by Messrs. Lucombe Pince, & Co, called splen-

didus, but we do not know if it has been imported into this country.

The cultivation of these plants is very simple; any loose, light soil seems to suit them; but they do best in baskets planted among chopped moss and fibry peat. Kept in a warm, moist house while growing, and kept dry and in a moderate temperature during the winter, they will grow rapidly and flower abundantly. Cuttings root very readily in sand under a bell glass.

ROSEDALE NURSERIES, DARBY ROAD, MAY 10th, 1853.

SUMMER PRUNING OF THE PEAR.

MR. EDITOR:—I promised in my last to say a word to your many readers, but your calendar writer, S. B., has fairly anticipated me, and has, moreover, said as much in ten lines as book-makers generally do in ten folios—in fact he has done up the subject well—read it again. It is thirty years since I summer-pruned fruit trees, but I have lived to see that the science was very imperfectly understood then, and those who may succeed us will, I hope, be able to say so of us. Our pruning was done in August just on the return of the sap; an error if you wish fruit; a fit time if you wish wood. Before this reaches your friends it will be time for many of them to begin *to prune*—not by cutting off shoots and thinning out, but by pinching off the tip of the young growth as soon as it has made six inches of young wood. Some may require nibbing off entirely where they form a thicket; but that is rarely required when the tree has had a judicious winter pruning. Strong shoots that offer to outgrow all others will require frequent topping during the season; and those of weaker growth will do with one topping, observing to keep the proportions of the tree in the eye that it may be regular and uniform from base to tip; much defoliation should never be performed; the smaller the portion the more healthful the tree; deprive it of its foliage and you at the same time deprive it of a portions of its roots. When the summer pruning is performed

at the time we indicate, and in the manner described, the next season will show that many of the trees have formed fruit buds on this year's wood. We object to summer pruning during the heat of the season, unless it be an occasional exuberant shoot. The tree at that period requires all the foliage and growth to keep the bole of the tree cool and the sap in active circulation. Some trees, however judicious our management, are tardy in producing fruit buds. We have often, and do now every July and August, twist a piece of wire or cord tight round a limb, which checks the returning sap and causes it to be elaborated in the limb instead of the root. Another method, and a very old one too, is to cut out a ring of the bark about one-quarter of an inch in width, disturbing the sap on the surface of the wood as little as possible. From this old practice it will not surprise us to see a new one arise, that instead of scraping the outer bark off during early spring, the trees will yet be entirely denuded of their bark about the end of June, when a new bark will be made in 48 hours, and a new life, and new energies given to the tree. We are not thorough arborists until we can take a growing branch of a tree and unite it to its kindred species at any period of the year, and when that time arrives, planting will not be confined to two short periods of the year. When attending to summer pruning, attend at the same time to thinning out the fruit; one dozen first rate in size and fairness will bring more money than two dozen of inferior, or even *mediocre* size. Such is the opinion of

yours truly,

R. BUIST.

THE CAUSE OF BAD COLORED GRAPES.

There was a curious discussion a few months since in the London journals about a grape exhibited there as the "Red Hamburg." One party calling it a badly colored "Black," the other stoutly maintaining its distinctness. Dr. Lindley, while adhering to the former party, thought it would be interesting to know whether grapes colored badly in warm climates—intimating that the real cause of bad coloring was not yet clearly understood. Having paid much attention to the subject, and having been fortunate in having a

very *varied* experience in grape growing in many circumstances, and in many conditions, I have at length arrived at the conclusion, that bad coloring is the result of a disproportion between the quantity of roots, and the fruit to be nourished on any given vine.

Opinions *seem* to be very opposite on the subject. Some asserting their belief that the cause lies with "leaving on too many bunches;" others "a want of air at the time of coloring;" another section, "the want of bright sunshine or light" at that period; and then again in "the borders being too wet," "too poor," "too rich," or "the vines being placed too deep." The quantity of heat or light has nothing to do with the subject of grapes *ripening* without color, for without heat or light sufficient they will not ripen at all though every other circumstance be favorable. The advocates of the other theories are *all* right. Mistaking effects for causes results in the *seeming* opposition of opinion. For instance, when "too many bunches" are left on, the proper proportion of roots to bunches is overbalanced—in other words the supply of nutriment afforded by the roots is insufficient. Then again if the borders are ill drained, or become in any way so wet that the young fibres are rotted off, the disproportion is again originated, and the grapes will not color. If the vines are planted too deep in the borders, fibres are produced in very small quantity; and, as the fibres draw much nutriment from the atmosphere, the few that do exist are in no way proportionate to the demands made upon them by the plant and the grapes will not color. A border that is too rich, whereby the fibres are "burnt up," or too poor to sustain the proper life of a grape vine, will also have the same effect. It is very rarely that we see a grape growing in a soil rather dry, and not well enriched, ripen with a bad color, and where they seem to be, an examination will find that the want of color is in reality a *want of ripeness*, arising from insufficient air, light, or heat. In a cold vinery where some grapes grew in the house at the back wall, and others planted deep in an outside border and trained up the rafters, I have had the former beautifully colored, when the latter were but indifferently so; and in forcing them in pots, I have found that if a vine get "over-watered" causing some of the roots to decay, the same results happen. So if the pot is too small for the strength of the vine, the bunches will color badly, unless assisted by liberal supplies of manure water.

From such observation and experience I lay it down as a rule, that whatever interrupts the proper course of nutriment between the roots and the fruit, produces "Red Hamburg's."

THOMAS MEEHAN.

NOTES ON ROSE CULTURE.

BY A LOVER OF ROSES.

"Good work never springs from bad materials" is as orthodox on the present subject as any other. So the first object of attention is good soil, on a dry bottom; or in other words good, rich, sandy soil, free from stagnant moisture in all seasons. Such being the case, we are indifferent about the exact component parts of the soil, but it must be rich to produce anything approaching a luxuriant growth, and full sized flowers. To obtain such I will briefly touch upon the following subjects—soil, disposition, sorts and pruning.

Soil. I prefer a sandy loam, dug at least 18 inches deep, and incorporated with at least one eighth of manure that is at least 4 to 6 months old. I prefer it from the cow stable, but when I can get a profusion of decomposed leaves from the woods and mix it in equal portions with the garden soil I never fail to have flowers of full size and fine color, and am convinced of finer odor. Another point of vast importance to the success of the grower is never to plant a rose in soil where a rose has grown before; invariably replace your soil, or grow on it grass or vegetables for 2 years before renewing your rose plantation. The many failures, and disappointments that often occur arise solely from this neglect. How frequently have I seen some of my neighbors dig up an old worthless rose bush that had exhausted all the soil in its vicinity, and replant some other sort of more fashionable reputation that did not take hold of the soil, and consequently never made a growth. The failure in nine cases out of ten, was cast upon the plant, or perhaps the unfortunate vender, whereas had it grown the planter would have assumed the full credit of its success. I speak now from experience for which I have fully paid.

Locality, is another important step in rose culture. In city gardens especially, how frequently you see some of the finest plants of the rose purchased in the market, carefully carried home and planted directly opposite the back parlor window, whether the sun shines or not the rose is planted to grow? No—to die or dwindle out a sickly existence. Again in the country how frequently are your nerves irritated by seeing a fine *Souvenir de la Malmaison* or a

Giant of Battles, both indispensable kinds, planted under the shade of some large maple, oak, or pine tree; every flower they produce is smaller than the one that preceded it, till you hear "Well! I am quite discouraged with my roses, they won't grow." It is not surprising; the soil exhausted with other roots, and the sun (so essential) rarely smiles upon the plants. Avoid, therefore, all those crowded, shaded localities, and give them a full, free exposure, where the sun will have its full influence at least 4 to 6 hours every day from February to November.

Disposition. Whether it be five feet or five acres, let it be a rose garden; the very name itself carries with it an irresistible charm. Do away with all those incongruous mixtures of plants; not a "wilderness of sweets," a wilderness of confusion; cast your eye where you will, all is alike, a confused mixture—nothing striking, nothing to visit the eye; nothing for it to rest upon; nothing to brighten; nothing to dazzle—all is one monotonous view. I go in fully for variety, but a decided variety, and a decided place for it, whether in the garden, on the lawn, or in the rosery; by the drive or in the park; and may I while on this subject ask for the benefit of your citizens, and the strangers who visit here every season and leave therein their thousands, why Lemon Hill, the property of the city, now lying waste, is not converted into a Rose Park? It could not be appropriated to a more pure and beautiful purpose; we say then, give roses their place and they will in all their splendor shine from May till the chilly blasts of winter. There is no situation which they are not adapted to, or can be made to suit; amongst rocks; over tree roots; by old quarries; on uneven surfaces; gangways to barns; espaliers to back buildings and out-houses; in the vicinity of water; by the lake or rivulet. Oh, strange! I have just said they must have a dry subsoil, and now recommend them for margins of lakes, &c. How can their roots be dry in such locality? Pray roll together a few logs, tree roots, or large stones; cover them entirely, or partially with rich earth, and plant thereon. You will have in a few years very romantic masses of roses, rambling in every form, and waving their crimsons, purples, blushes, pinks and whites, in separate clumps. This arrangement is much more pleasing to the eye, and creates a greater variety. Climbers

or runners; dwarfs and mediums, should have their separate spots, and independent treatment. It is much better to select a few prominent, than to run into a great variety. We can by this arrangement procure plants much cheaper from the growers, or raise them by cuttings or layers, which is simple enough to those who will devote a little patience or time to the subject, or those who prefer to begin at once, and with the return of the plant season might, we think, procure in May sorts in quantity at 12 to 20 cents each

[*To be continued.*]

MANDEVILLA SUAVEOLENS.

Much and deservedly as this splendid climber is prized wherever it is properly cultivated, it is nevertheless perfectly unknown in many places, a statement which may seem incredible to some, but which is strictly true. The lady owner of an elegant and well kept conservatory recently expressed surprise at seeing the Mandevilla rambling about the roof of a house in which she was standing, and covered with its deliciously fragrant clusters of snowy white Convolvulus-like blossoms; she said, "We tried it in the stove, but we could not afford it sufficient space, and it was not very satisfactory; we therefore did not think that the conservatory would be warm enough for it." And a correspondent, evidently an intelligent person, writing so recently as the 10th inst., from one of the principal towns of the kingdom, begs for such information respecting it as plainly indicates that it is not commonly grown in his locality. Had it not been his request to be informed whether this, the best of conservatory climbers, is worth growing, I should not have selected it as the subject of an article; and I do so now more for the purpose of recommending it to notice than to give especial directions for its culture. As minute instructions may, however, operate as an inducement to some amateurs to add the plant to their collection (and there are few plant houses in which a suitable place for the Mandevilla might be found,) I have thought it worth while to give them.

It is not very suitable for pot culture, at least I believe it is not; for except the two first plants I had of it, I have never attempted to grow it in this manner. I am convinced, however, from the success which I obtained with those, that it may be made to bloom rather freely in a pot; and the fragrance and beauty of the flowers render it worth an effort to obtain them in that manner. Were I to attempt its culture in pots, I would treat it as follows; and although the display of blossom which I might get would be poor compared with what plants turned out in the conservatory border, and allowed plenty of space to ramble about, would produce, it would nevertheless be ample compensation for the little attention which the plants would require.

I would procure good strong young plants, say in March, prune them back closely, leaving but one joint of the last season's growth; then place

them in a house where the night temperature might average about 50°, and when the plants started into active growth, I would give a moderate shift, and stop the shoots once or twice, to ensure an abundance of young wood. When the pots became filled with roots, I would shift into the flowering pots, which should be 15 or 18 inch ones, according to the strength of the plants. The vigorous habit of the plant renders a good sized trellis necessary, which should be applied at once, and the shoots neatly and regularly tied over it. Water should be given rather sparingly at the root from the time when the plants are placed in the flowering pots; but the syringe should be used freely, and the plants kept in an airy, light part of the house, and if the night heat can be conveniently kept as low as from 50° to 55°, it will be more suitable than a higher temperature. When the trellises are well covered with wood, which probably may be the case by the middle of June, remove the plants to the greenhouse, placing them in the warmest end of it for a few days, to avoid injuring the foliage by a sudden removal from a moist atmosphere to a dry one; and when they are inured to the change, expose them freely to sun and air, giving no more water at the root than will suffice to keep the foliage from flagging. This treatment continued for three weeks or a month, will effectually check the tendency of the plants to make wood, and when this is effected, they may be placed in the warmest corner of the greenhouse, where they will speedily begin to open their blossoms.

The plants of the *Mandevilla* which I grew in pots were treated in the above manner, and I distinctly recollect that one of the specimens was very much admired, and produced a great number of clusters of flowers during August and September; the other was a weak plant when received from the nursery, and produced but a few clusters, owing doubtless to its having been stopped back later in the season than the stronger specimen, both were planted in the conservatory the following spring, where they have been so satisfactory that I have never cared to attempt cultivating it as a pot plant. Those, however, who possess a conservatory or greenhouse where climbers can be grown will find the rafters the best possible situation for its growth, especially if the roof of the house is kept close, and the roots can be afforded a moderate space in a border composed of light sandy loam, which is the soil I would also recommend for its pot culture.

Whether in pots or turned out in the conservatory border, the soil should be kept rather dry after flowering, and till it may be desired to start the plants into growth in spring, and severe pruning is absolutely necessary to keep the plant within bounds; the young wood should be cut back to the last joint, except in the case of plants that may not have attained the desired size, and plenty of water should be given to keep the border in a healthy moist condition during the growing and flowering seasons.

It is readily propagated by means of cuttings of the shortest jointed wood, taken when rather firm, and planted in light sandy soil, covered with a glass and placed in a gentle bottom-heat, but the plant seeds very freely, and thus affords an easy means of increasing it to any extent.

Alpha, (in Gard. Chron., April 28.)

AN ENUMERATION OF THE VINES OF N. AMERICA.

BY JOHN LE CONTE, F. L. S.*

(CONCLUDED.)

6. *V. ARANEOSUS*. Foliis lato-cordatis, sublobato-angulatis, integris, trilobis aut quinquelobis, lobis acuminatis, dentatis, dentibus submucronatis, supra glabris, subtus arachnoideo-villosis, villositate plus minus ferruginea. Racemis subdensis, baccis majoribus nigris.

Hab.—In the upper parts of Georgia. Vūlg. Fox grape.

Stem moderately large and high. Leaves broad, cordate, sublobately angled, entire and three or five lobed, acuminate dentate; the teeth submucronate, above glabrous, beneath arachnoideo-villous, more or less ferruginous; in the older leaves this villosity forms into small tufts or knots, and in the very oldest almost entirely vanishes, although in the youngest it is very thick and close. Racemes dense; berries of a middling size, .5 of an inch in diameter, black, often very sweet and agreeable. The leaves are sometimes 8 inches long and as many wide.

This species is well worth cultivating.

7. *V. BICOLOR*. Foliis lato-cordatis sublobato-angulatis acuminatis subintegris et tri aut quinquelobis irregulariter dentatis, dentibus acuminatis aut mucronatis supra glabris subtus pallidioribus, in junioribus sparse arachnoideo-villosis. Racemis laxis, baccis parvis nigris.

Hab.—From Pennsylvania to Virginia. *V. æstivalis*, Darlington, *Florula Cestrica*.

Stem moderately large and high. Leaves broad-cordate, sublobately angled, acuminate, subentire, and three or five-lobed, irregularly dentate; the teeth acuminate or mucronate, above smooth; beneath paler in the younger leaves, sparsely arachnoideo-villous, the villosity entirely vanishing with age. Racemes long, loose and compound; berries small, black, .3 of an inch in diameter, sweet and agreeable.

* See Proceedings Acad. Nat. Sci. Phila. Feb. 1853.

8. *V. PUL-LARIA*. Foliis glabris, ovatis cordatis acuminatis, ut plurimum versus apicem obscure aut profunde trilobatis rarius quinque lobatis sæpe integris, inæqualiter grosse dentatis, acuminatis. Racemis longis ramosis laxis.

Hab.—In Virginia and Maryland. Vul. Chicken grape.

Stem moderately large and tall. Leaves thin, smooth on both sides, polished, ovate cordate abruptly acuminate, beyond the middle more or less tri-lobed, sometimes five-lobed, often entire, unequally dentate; teeth large, acuminate; petioles and nerves beneath conspicuously pubescent. Racemes long, compound and loose; berries small; 3 of an inch in diameter.

9. *V. RIPARIA*. Foliis glabris ovatis cordatis acuminatis ante medium plus minus trilobis sæpe integris dentatis, dentibus latis depressis, brevi-mucronatis. Racemis laxis baccis parvis.

Hab.—In Georgia and Mississippi on the banks of rivers in overflowed places. *V. riparia* Mx. *V. dimidiata* Rafinesque.

Stem large and tall. Leaves thin, smooth on both sides, polished ovate, cordate, acuminate, more or less tri-lobed beyond the middle, often entire, sub-crenato-dentate; teeth broad, flat, with a short point; the youngest leaves with a slight arachnoid pubescence beneath, petioles, nerves and margin pubescent. The leaves are sometimes five-lobed, the upper lobes with deep spathuliform sinuses, the margin but little dentate. Racemes loose; berries small, 3 of an inch in diameter, black and acid.

This species, confounded by most authors with the next (if it has ever been seen by them,) is found only in the southernmost States on the margins of rivers, in places frequently subject to inundation, whence its name among the inhabitants of the banks of the Mississippi, *Vigne de battures*; it very much resembles the next, but is easily distinguished by its thinner leaves and the arachnoid pubescence on the under side of them in their younger state.

10. *V. ODORATISSIMA*. Foliis glabris ovatis cordatis acuminatis inæqualiter crenato-dentatis dentibus mucronatis, ut plurimum versus apicem obscure trilobis. Racemis laxis, baccis parvis.

Hab.—In the Northern States, in dry situations, generally on the sides of rocky hills. *V. odoratissima* Donn. *V. riparia* Pursh, Torrey

and Gray, &c. *V. scrotina* Bartram, l. c. seems to be *V. cordifolia* of Emerson, &c. *V. montana*, *concolor*, *columbina*, *populifolia*, *odoratissima* and *amara* Rafinesque.

Stem large and high. Leaves smooth on both sides, broad-ovate, cordate; acuminate, unequally crenato-dentate, teeth mucronate; generally obscurely trilobate beyond the middle, nerves beneath very prominent, margin, nerves beneath and petioles pubescent; a small pubescent tuft on the axillæ of the nerves of the under side of the leaves. Racemes long and loose, berries small, 2 of an inch in diameter, black, very acid and austere, ripening in November.

This species is much cultivated in gardens on account of its fragrant flowers, the perfume of which is exactly that of *Reseda odorata*. It very rarely produces fruit. I have found fertile individuals only on the rocky hills north of Hoboken, N. J. I have been informed that the Indians formerly used the juice of this grape for dying blue.

11. *V. ROTUNDIFOLIA*. Foliis glabris nitidis rotundo-cordatis, acuminatis nunquam lobatis grosse dentatis, dentibus acutis subæqualibus, racemis parvis baccis magnis nigris, rubescentibus vel albis.

Hab.—From Virginia to Florida. *V. rotundifolia* Mx. *V. vulpina* Walter. *V. acerifolia*, *vulpina*, *angulata*, and *verucosa* Rafinesque. Vulgo Bullace grape, from its resemblance to the bullace or wild plum of Europe, corrupted into Bull grape. In Virginia and N. Carolina it is called Muscadine and Scuppernon grape.

Stem moderately large, unlike every other species perfectly smooth even in the oldest vines. Leaves thin, smooth on both sides, polished, shining, most so beneath, round, cordate, never lobed, acuminate dentate; teeth large, subequal, acute; axillæ of the nerves beneath sometimes furnished with a small tuft of pubescence. Racemes small, simple; berries large, 2 of an inch in diameter, round, black, reddish, or white.

This vine most frequently produces fruit of a delicious flavor and very sweet. In North Carolina much wine is made from the grapes, but generally it is spoilt by mixing it with peach brandy or whiskey to increase its strength. Among the ignorant it is commonly tho't

that no fermented juice of fruit can be kept for any length of time, unless it is adulterated with alcoholic spirit.

In the pine forests of Georgia the *V. rotundifolia* is found prostrate, with stems scarcely 3 ft. long.

12. *V. PALMATA*. Foliis ovato-cordatis utrinque glabris, profunde quinque lobatis palmatis, laciniis sub lanceolatis, inæqualiter lateque crenatis vel incis. Racemis subdensis subsimplicibus baccis magnis albis gena cupræa.

Hab.—In North Carolina and on the banks of the Ohio. *V. palmata* Vahl. *V. virginiana* Poiret.

This grape, which is the true Bland's grape of former years, was once (30 years ago) extensively cultivated in the gardens of this city, but has since been utterly lost. I cannot now find a single plant of it. It was perfectly hardy, bore profusely, and ripened before the frosts.

The above description is made from memory assisted by Vahl's and Poiret's descriptions. I have seen it growing wild in the mountains of North Carolina and have been informed that it was once common on the banks of the Ohio river. There is certainly no grape found in America that can be compared with it; in every respect it is equal to any variety of the *V. vinifera*, being very sweet and perfectly free from pulp, and without that peculiar flavor which is more or less common to all other American species.

The *V. cordifolia* Mx. I have never met with, at least a species corresponding with his description has never fallen in my way either in the North or South. It is said to extend from Pennsylvania to Florida. There is another small and sweet grape called the Orwigsburg which I have omitted, although said to be native, I could never satisfy myself that it was so. It has much the appearance of foreign varieties.

Of the foregoing species, those most worthy of cultivation are of No. 1, the white variety, and the Isabella or Catawba, which would probably flourish in the coldest parts of Europe; Nos. 6, 11 and 12, all of which are sweet and agreeable, and furnish good wine.

INDIGENOUS PLANTS.

As the floral season has commenced we must give, as we promised, the names of the various plants indigenous to this neighborhood. At this time (April) all are in bloom from the very earliest. *Draba verna* is generally the first open, and *Hepatica triloba* and *Epigæa repens*,

“And where the spring some happier verdure frees
Laugh into light frank-eyed Anemones.”

Many of our readers, no doubt, like ourselves, are making additions to their herbarium, or it may be commencing one; to these we would give the advice, “neglect nothing, no matter how common it may be.” Do not leave your collection without *Ranunculus acris*, because it is “only a Butter-cup,” or *R. abortivus*, because the flowers are not pretty—take Gray’s Botany of the Northern United States, a book which you cannot do without, and preserve every plant you can find: you will learn more by collecting the plants and trying to get the names yourself, than by any other method. Beginners however must be careful not to jump at conclusions, or to guess at the names of plants, or they may find themselves very often laughed at; they need not fear that, however, from real plant-knowers, for these know the difficulties in your way and remember their own mistakes. And here let me urge the fact, that knowing plants by name at sight does not constitute a botanist, any more than knowing a great number of people would make an anatomist.

It has been said by plant collectors, that the Flora of the neighborhood of Philadelphia is one of the richest in this country, and certainly there are enough beautiful plants in flower from early spring until very late in the autumn, to satisfy any one who loves these most attractive of nature’s productions. Among the plants now in bloom in this neighborhood are the following—all of which we have either seen in flower or have had reported to us:—

<i>Anemone nemorosa</i> . Wood Anemone.	<i>Ranunculaceæ</i> .
<i>Hepatica triloba</i> , blue and white. Liver-wort.	“
<i>Ranunculus acris</i> . Butter-cup.	“
“ <i>sceleratus</i> . Cursed crowfoot.	“
“ <i>abortivus</i> .	“
“ <i>bulbosus</i> .	“
<i>Caltha palustris</i> . Marsh marigold.	“
<i>Aquilegia Canadensis</i> . Wild Columbine.	“
<i>Thalictrum anemonoides</i> . Meadow rue.	“
<i>Podophyllum peltatum</i> . May apple.	<i>Berberidaceæ</i> .
<i>Sanguinaria Canadensis</i> . Blood root.	<i>Papaveraceæ</i> .

<i>Corydalis aurea</i> . Golden corydalis.	<i>Furnariaceæ.</i>
<i>Dielytra cucullaria</i> . Dutchman's breeches.	"
<i>Arum triphyllum</i> . Indian turnip.	<i>Araceæ.</i>
" " Var <i>atrorubens</i> .	"
<i>Claytonia Virginica</i> . Spring beauty.	<i>Portulacaceæ.</i>
<i>Saxifraga Virginensis</i> . Early saxifrage.	<i>Saxifragaceæ.</i>
<i>Chrysosplenium Americanum</i> . American golden sax.	"
<i>Hedyotis</i> (<i>Houstonia</i>) <i>cærulea</i> . Quaker-lady.	<i>Primulaceæ.</i>
<i>Viola rotundifolia</i> . Round-leaved violet—yellow.	<i>Violaceæ.</i>
" <i>pubescens</i> . Downy violet—yellow.	"
" <i>striata</i> . Striped violet—whitish.	"
" <i>cucullata</i> . Hood-leaved—blue.	"
" <i>ovata</i> var. <i>sagittata</i> . Oval-leaved—blue.	"
" <i>pedata</i> . Bird's-foot—light blue.	"
" <i>primulæfolia</i> . Primrose-leaved—white.	"
<i>Dentaria laciniata</i> . Cut-leaved toothwort—white.	<i>Cruciferae.</i>
<i>Arabis lyrata</i> . American rock cress.	"
<i>Draba verna</i> . Early whitlow grass.	"
<i>Capsella Bursa-pastoris</i> . Shepherd's purse.	"
<i>Epigæa repens</i> , Trailing arbutus—pink and white.	<i>Ericaceæ.</i>
<i>Erythronium Americanum</i> . Dog's-tooth violet—yellow.	<i>Liliaceæ.</i>
<i>Obolaria Virginica</i> . Obolaria—pale blue.	<i>Gentianaceæ.</i>
<i>Lamium amplexicaule</i> . Dead nettle—purple.	<i>Labiatae.</i>
<i>Pedicularis Canadensis</i> . Lousewort.	"
<i>Antennaria plantaginifolia</i> . Everlasting—white.	<i>Compositæ.</i>
<i>Leontodon taraxacum</i> . Dandelion—yellow.	"
<i>Benzoin odoriferum</i> . Spice-bush.	<i>Lauraceæ.</i>
<i>Sassafras officinale</i> . Sassafras—greenish yellow.	"
<i>Luzula campestris</i> . Field rush.	<i>Juncaceæ.</i>
<i>Geranium maculatum</i> . Spotted geranium.	<i>Geraniaceæ.</i>

THE CURCULIO.—To prevent the ravages of this insidious insect, which in this climate often commences its depredations as early as the last of May or first of June, by depositing its eggs in the young fruit, prepare a mixture made in the proportion of one bushel of wood ashes to a quart of soot, and one pound of flour of sulphur; apply it in the morning while the branches and foliage are wet with dew, and in sufficient quantity to coat the tree.—This is a very effectual and cheap remedy.

Translated from the Comtes Rendus.

INFLUENCE OF AMMONIA ADDED TO AIR UPON THE DEVELOPMENT OF PLANTS.*

BY M. VILLE.

On adding ammonia to the air we find the activity of vegetation to be much increased. In the proportion 4,10,000 of the whole air this effect shows itself at the end of eight or ten days, and from this time its intensity steadily augments. The leaves, at first of a pale green, assume a shade more and more deep, until they become nearly black. Their foot-stalks grow long and straight, and their surfaces large and glossy. At last, when the growth has reached its maturity, we find that the product is much larger than that of the same plants grown in the pure air. This product is at the same time heavier and contains more than *double* the amount of nitrogen.

Thus ammonia added to air produces two effects on vegetation—first, it favors the growth of plants; and second, it renders them more nitrogenous. Thus in an experiment made in 1850, the product in pure air was 64.19 grammes; and that in the air containing ammonia was 110.06 gr. The first contained 1.266 gr. of nitrogen and the second 4.313 gr.

In 1851 the product in pure air was 68.72 gr. and contained 0.494 gr. of nitrogen. In the ammoniacal air the product was 135.20 gr. and contained 1.501 gr. of nitrogen.

Besides these general effects produced by ammonia, there are others of a more variable nature dependent on special conditions, but which are not less interesting. Indeed, by means of this gas we are able, not only to increase the activity of vegetation, but even to modify its progress, to weaken the exercise of certain functions, and to increase, without limit, the development or multiplication of certain organs.

If we expose the plant to the action of the ammonia some months before the time of flowering, its growth is more rapid, but is not accompanied by any disturbance of the usual succession of phases in its growth. It often happens indeed that plants, which when cultivated in pure air fail even to produce flowers, when grown in ammoniacal air produce matured fruit. But if we change the conditions of the experiment, if we wait until the plant is on the point of flowering before submitting it to the action of ammonia, the results are entirely different, the stem shoots up and sends out branches in every direction, clothes itself with innumerable leaves, and, if the season is

* In our last volume we extracted a condensed account of M. Ville's experiments; we have been favored by one of our lady readers with a translation of the original article.

not too far advanced, the flowering, suspended for a while, is resumed, but all the flowers are sterile.

If we make the experiment upon a cereal whose hollow stem does not admit of the production of new branches, the course of the phenomenon, the growth of the stem, crowned with its spike, is arrested, and from the neck of the root there spring up clusters of stalks which soon overtop the parent stem. In this case also the plant bears no fruit.

All these phenomena may be satisfactorily referred to the general laws of physiology. In truth all organized beings are subject to a law of compensation which maintains harmony between the functions, and controls the development of the organs. Whenever any organ receives an undue development it is at the expense of some other organ, and if a function exerts too much activity, it is always at the expense of some other function. If the organs of growth, that is to say the stem, the branches and the leaves are developed beyond a certain limit, it is at the expense of the organs of reproduction; the flowers are sterile and the plant bears no fruit. In the experiments above described, the plant was at the moment of flowering exposed to the action of ammoniacal vapor—its influence determined the formation of a certain number of leaves. This sudden formation of new leaves destroyed the equilibrium between the functions of growth and those of reproduction, and caused the former to predominate over the latter.

The action of ammonia does not operate with the same energy in all the stages of the growth of plants. The effects are more marked from the time of germination to that of flowering than from this last period to the ripening of the fruit. This difference is easily understood. Up to the time of flowering all the activity of the plant resides in the foliaceous organs; favorable influences determine the formation of an increased number of leaves, which, being the organs of absorption, add their effect to the cause which has given them birth. After the flowering on the contrary, all the activity of the plant is turned to the organs of reproduction. Part of the leaves wither and fade, and those which remain are far from being as large as the first; the result is that the surface of absorption is diminished. Furthermore, at this stage the plant is near the extreme limit of its development. These two considerations enable us easily to account for the less marked effects that ammonia produces during the second period of the life of plants.

The use of ammonia cannot fail to become common in greenhouses. In an experiment where it was introduced into a greenhouse of Orchidæ it was found to impart an extraordinary activity to their growth. The results obtained under these new conditions are so striking that the practical question may be regarded as settled.

During the great heat of summer, ammonia may occasion accidents. It would be well therefore, to suspend its use during the months of June, July, and August. Such accidents as have been observed always occurred under the same conditions, and were of a uniform character. They affect chiefly plants whose vegetation is far advanced. The leaves turn yellow, wither, and fall; even though the atmosphere may be saturated with moisture, the evil extends to a certain number of leaves at the top, and the plant dies. This effect is the result of a certain failure of equilibrium between the quantity of the elements absorbed by the leaves and the roots. It is through the roots that mineral substances are supplied to plants. If the absorption of these substances goes beyond a certain limit, the plants cannot use all that they receive and they form a saline efflorescence on the surface of the leaves. If after a heavy rain the weather becomes dry, we observe frequent examples of this sort of efflorescence upon the large leaves of cucurbitaceæ.

When under different circumstances, the activity of the leaves exceeds that of the roots, the absorption of organic elements becomes predominant. For want of a sufficient supply of mineral matter, these elements cannot be usefully appropriated. Then a remarkable effect is observed, that which the roots cannot yield to the plant it obtains within itself; and there is a re-absorption of the mineral substances of a certain number of leaves. In nature we often see examples of this re-absorption of the older organs to the advantage of those more recently formed. If we break off a plant of Purslain when it is in flower and put it on a sheet of paper in the shade, the vegetation continues, the seed forms and ripens. Now in this case the mineral substances contained in the seed could not be derived directly from the soil, but must therefore have been drawn from the tissues of the plant itself.

The following conclusions may be drawn from the observations above detailed.

First—In the proportion of 4.10,000 ammonia added to the air imparts to vegetation a remarkable activity.

Second—A given weight of the product thus obtained contains more nitrogen than that of the same plant grown in the pure air.

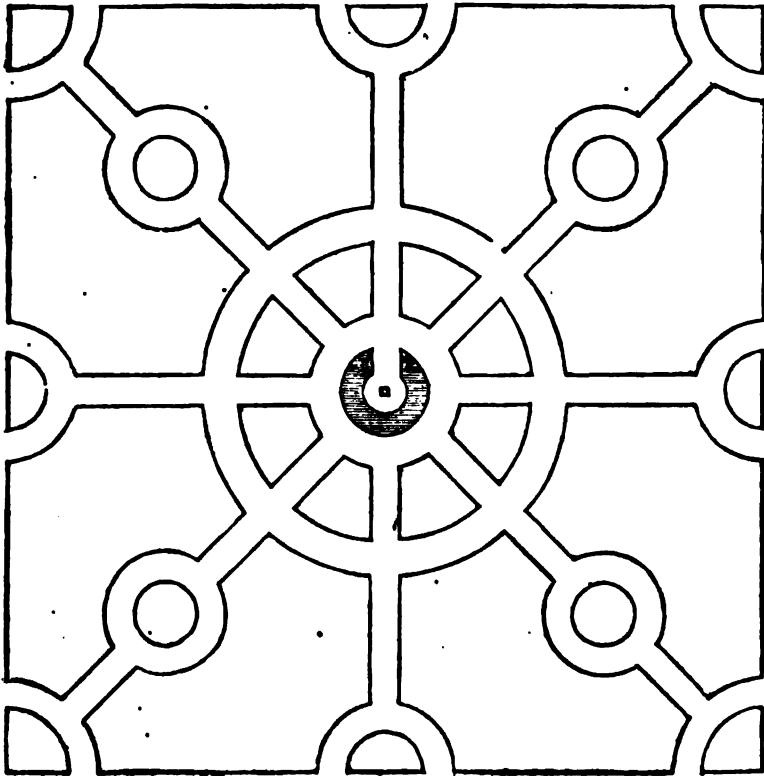
We may add, that periods may be selected for the use of ammonia in which its influence causes very different effects.

First—If we commence the use of ammonia two or three months before the flowering of the plant, vegetation follows its usual course, and no disturbance takes place in the successive phases of its growth.

Second—If we begin to supply the gas at the moment of flowering, the formation of flowers is arrested or retarded, the plant covers itself with leaves but produces no fruit.

FLOWER GARDENS.

In a former number you gave an illustration of a flower garden, intended to be cut out on grass. The present design is to be traversed by gravel walks edged with box—a system preferred by many on account of the paths being accessible at all seasons, if the walks are properly made, which is not the case when grass forms the path. The arrangement in planting also differs from the last; the large beds in the figure are chiefly for the herbaceous plants, with a few choice flowering deciduous shrubs, as *Forsythia viridissima*, *Weigela rosea*, various *Spiracas*, *Deutzias*, *Tree Paeonies*, &c., intermixed. A few evergreens kept in neat shape, will give variety; Swedish, Irish, and other varieties of *Junipers* will be suitable. The *Hemlock Spruce* forms an evergreen ball under judicious pruning. The herbaceous plants should be arranged with care, the tallest in the centre, leaving space at intervals for the introduction of *Dahlias*, *Salvias*, &c., in summer. The small beds surrounding the centre may be filled with dwarf growing plants—the whole arrangement, when viewed from the inside, showing a gradual rise to the extremities.



The centre may be occupied with a pedestal and dial, surrounded with a small rockwork overrun with suitable plants. A better effect will be obtained if excavated in the form of a basin, supplied with water from a jet rising in the centre. This will depend upon the facilities for a constant supply of water. Many beautiful aquatic plants could be kept in a basin of this description. The edging of box must be kept closely trimmed; if allowed to get large its effect and use are destroyed. Where a small piece of ground is set apart exclusively for flower culture, designs similar to the above give it at once a distinctive character, and is the most economical with regard to the filling of the ground.

WM. SAUNDERS.

NEW OR RARE PLANTS,

FLOWERED FOR THE FIRST TIME THIS SEASON, AT SPRINGBROOK.

No. V.

When I commenced these notices, I had no idea that any one would suppose me to intend to notice only those recently introduced *from their native places of growth*; yet I have been asked in another journal by what right I have included *Rhodostemma gardenoides* in my remarks. So far as I can judge by an extensive perusal of the catalogues and advertisements of the leading nurserymen, and by ocular advantages in the leading establishments, there is not another plant in America besides our own. If not, and our plant is just imported into America, it is *new*. If it does exist, it is little known, and therefore *rare*. In either case it comes under the head I have chosen to remark upon. I aim at usefulness, making no pretensions to absolute knowledge. As we aim in this establishment at possessing all beautiful novelties as soon as they can be obtained, I had an idea that my failures or successes in their cultivation, or my experience of their value or worthlessness might benefit some of the readers of the "Florist." With this "declaration of my intentions" I will proceed to describe.

CALADIUM BICOLOR. This plant has been in cultivation in the English gardens nearly eighty years, and in this country it has existed in some collections under the name of *Arum discolor* for a long time. It is not near so common as it ought to be. It has been here three years, and recently flowered for the first time with us. The leaves alone give it attraction; they are ovate, about 9 inches long by 6 wide, and are of a rosy-pink color, with a border about half an inch of pale green. When a leaf is put under water it presents a beautiful changeable silvery appearance. The flowers are spatheous, like all the *Arum* family, about 3 inches long by 2 wide; it is of a pure waxy white, with the spadix or central column of male flowers straw

color. It is highly odoriferous, and will remain in a succession of bloom three or four weeks; it is just out of bloom in our Victoria house; it thrives well in a turfy loam in a moist and shady part of a stove. While growing it requires an abundance of water; when it shows symptoms of rest, moisture should be in smaller proportions but never entirely withheld. Received from Mr. Buist.

PHYSURUS ARGENTEUS. Another plant the principal attractions of which reside in its foliage. These are of a pale glaucous green, netted very regularly with silvery veins, resembling in that respect our own Rattlesnake Plantain (*Goodyera pubescens*.) The flowers are small, white, with a black line down the centre of the lip and lateral sepals, and numerous placed in a conical form on a spike six or eight inches high. It thrives well in our orchideous house in turfy peat; it does much better in a small than in a large pot; it is a very scarce plant, and generally known in the gardens as *Anætochilus argenteus*. Dr. Lindley, who is the leading authority in the matter of orchideous plants, makes it a *Physurus*. Imported from Messrs. Low, of Clapton.

CHYSIS BRACTESCENS. Another Orchidea, as beautiful in its flowers as the former is in its foliage. Our plant, imported from Low two years ago, is just now in flower; they appear in threes, on a stem about six inches long, arising from near the base of the past season's pseudo-bulb. Each flower is about two inches wide; the column and lateral petals are white and thick, and the large gibbous lip striped with a gamboge yellow. It thrives best in a basket of broken charcoal, moss, and decaying wood; and when growing, loves the application of the syringe several times a day. It does not require a very high temperature, from 50° to 60° doing as well as any.

LANTANA LILACINA. This is a species, perhaps but a variety, with the habit of *L. crocea*. The heads of flowers are about the size of that kind, of a dull white when they first come out, afterwards changing to a fine bright lilac. It is of the easiest culture, thriving in well drained pots of rich loam in a warm greenhouse. It seems inclined to bloom the whole season as it grows, and in that case will prove desirable as a bedding out plant. Our plant was obtained last summer from Messrs. Hovey.

GARDOQUIA HOOKERII. This is not a new plant to our neighborhood; but far rarer than it ought to be. It is a small bushy greenhouse shrub, always in flower, but never profusely so; the leaves are like box, and the flowers come out in the axils about 1½ inches long, of a deep red color. It thrives in sandy loam enriched with a little decayed leaf soil. Like the former, I imagine it would make a good bedding out plant. Our plant was obtained from Mr. Peter Mackenzie, of Philadelphia. This plant is said to be the *Cunila coccinea* of Nuttall. Its botanical characters seem to differ widely from those of our native *Cunila mariana*. Its calyx, though hairy at the mouth, is irregularly cleft, with unequal segments; the upper lip of the co-

rolla is horizontal instead of erect, and the stamens are curved into each other instead of being spreading. Will any of our botanical friends explain?

PHYLLOCACTUS CRENATUS. The genus *cereus* of Haworth, has been 'split' by Link, the German authority for all cactus affairs. His "*Phyllocactus*" comprises the "*alati*" or section 7 of *cereus* in "*Pfeiffer's Enumeratio cactearum*," and for all practical purposes may be distinguished as *Cereuses* with flat stems. The present species is the finest of the division; my plant is small, but produced this spring one flower; the tube was nine inches long before expansion; the mouth measures five inches across when fully open; the outer petals are of a cream color, the inner ones pure white. The habit of the plant resembles *P. Ackermanii*, but the branches are more notched or crenated. The flower lasted but about a day perfect, after it was fully expanded. It thrives well in sandy loam mixed with some leaf mould and lime rubbish, receiving an abundance of water while growing, and but just enough to keep it from withering in the winter.

CAMELLIA, A. J. DOWNING. There have been so many good, bad and indifferent Camellias making their appearance lately that we are incredulous of the superiority of any new candidate for popular favour. A. J. DOWNING, which Mr. Cope received early in the spring from its raiser Mr. Becar, of New York, is of a different stamp to many of the new ones; they are mostly of the *imbricata* class; this is more in the way of *Sacco*. The flowers are beautifully cupped, resembling in form and color a well grown *Hermosa* rose. The first flower that opened with us was finer than those exhibited at the April meeting of the society, being borne on the strong central shoot—the latter being from two very weak side ones. It is proposed by the raiser to sell the stock by subscription, and with the proceeds purchase a full sized portrait of Downing for some horticultural society.

PIMELIA VERSCHAFFELTII. The old *P. decussata* is well known, and the *P. spectabilis* scarcely less so. This much resembles the latter in habit, but the flowers are of a pure white, each seeming dotted with yellow, in consequence of the position of its two yellow anthers. It was received last fall from Messrs. Lee, of Hammersmith, London, and thrives well in a cool greenhouse, somewhat shaded, in sandy loam with a little peat.

TETRATHECA HIRSUTA. This plant is one of a very pretty tribe of plants from New Holland, called by Brown *Tremandaceæ*. This species is often called a *Tremandra* in the nurseries, and also *Tetratheca Hugelii*. The leaves are small, about the size of box leaves, but soft and papery; the flowers are purple, and come out as the plant grows singly from the axils of the leaves. It seems to be a free bloomer. We received our plant early in the spring from Mr. Buist, and it commenced blooming at once and continues as it grows. It does well in turfy sandy loam, in a cool greenhouse.

THOMAS MEEHAN.

"I would be glad to see in the "Florist" some instructions about drying and pressing plants and flowers, and preparing them for a Herbarium.

"J. M. S."

If we had space we would like to give all the best methods of doing this. The simplest way is to provide yourself with two flat boards, of proper size, and a quantity of bibulous paper; to our knowledge there is none manufactured for the purpose in this country; in England several persons make it. Having obtained a specimen, place it carefully between sheets of unsized white paper, arranging the leaves and flowers so as to show the formation of both to the greatest advantage; place these sheets between folds of other soft paper, in sufficient quantity to preserve the plant from crushing by the boards, and apply pressure by weights placed above—it is thought by some that pressure should be limited at first, but with sufficient paper any amount may be given. The quicker the operation is performed the more perfect will be the specimen, and the colors will be better preserved. By frequent changing of the paper and by great pressure, a plant may be dried in twenty-four hours. A simple press may be made by passing a rope around the boards and twisting a stick in it, after the manner of a tourniquet. In a future number we will give fuller directions on this subject.

THE Gardeners' Chronicle is advocating the growth of the Deodar for timber. A correspondent of that journal says: "It is very certain that Deodar wood from its fineness of grain, strength and durability, is one of the most valuable of the timbers of the Himalayas."

CALENDAR OF OPERATIONS.

MAY—JUNE.

FLOWER GARDEN.—The beds and borders filled with the plants intended for the season's blooming, will still require attention. As fast as these plants in masses grow, they should be pegged down to the soil and encouraged to grow over the whole of the ground. The earth is shaded better by this practice and the plants grow more in proportion. A few plants of many things should be retained in pots, so that any vacancies that may accidentally oc-

cur, by the maturity of annuals or any other cause, may be supplied. Dahlias will now be an object of attention; the best soil for them is a rich loam, rather moist, and the best situation a cool one. Tulips, Narcissus, and other bulbs are frequently taken up as soon as they have done flowering; the leaves should be quite dry first. When taken up dry them gradually in a shady place, then put them in a cool place till wanted. Auriculas and Double Primroses are generally killed by our hot summers, especially after heavy rains; if growing in a sunny situation some method should be devised to shade them. The same may be said of the Pansy; with the greatest care these plants will often die out; attention should be paid at this time to insure a young stock, both by seeds and cuttings. In saving seed, select for that purpose the best flowers—those that are large, well-formed and of marked colors. Carnations and Pinks should be layered or struck early, so that they may be well rooted before winter; I usually commence when they are just going out of flower. There is a growing taste for the Pæony; they are beautiful, and may be much diversified by hybridizing and cross breeding. Being in bloom now, attention can be given to the subject. The Hollyhock also is making great progress in popular favor; they prefer a rich sandy loam and a rather dry situation; they are well adapted to our climate, and ought to be more general.

Brompton stocks, German Double Wallflowers, and other *biennials* intended for next winter or spring flowering, should be sown at once, if not already done. Evergreens may still be planted; if possible, choose a time before anticipated rain, or give a good watering afterwards. In the neighborhood of Philadelphia within the last few years, evergreens have suffered much from *scale* and *red spider*. When these are noticed the trees should receive an occasional syringing with soapsuds. If the weather should become dry, some flower beds, or plants in beds and borders will require watering; as a general rule this should be avoided as much as possible; frequent waterings do little good—nothing brings on mildew sooner. Rather prevent the necessity by frequent stirring of the surface soil, or even by shading, where practicable. It is often a practice to put the grass mown from the lawns around the roots of some things as a *mulching* for this purpose. Whenever a watering must be done, let it be *thorough*, a “once for all” kind. Roses are commonly recommended to be *budded* early in June; in my opinion it is too early in most circumstances; I have found more failures in my own practice early in the summer than late in the fall. I shall have more to say on this subject next month. Lawns and walks will of course be kept mown short and clean, and well rolled after every heavy rain. Tidiness in all things is more looked for, and indeed more apparent at this season than at any other period of the year.

PLANTS, AND PLANT HOUSES. All plants intended to be set out in their pots and tubs should go out at once; choose situations for them partially shaded. Some "go against" this talk about shade. Plants in the sun when in pots require a large amount of water, which is liable to injure them—when in partial shade they are safe, though they may not bloom quite so freely. Of the two evils, choose the least. Those plants left in the greenhouse will require as much air as possible; if desirable to shade the glass a little, rye flour and milk boiled together till of the consistency of whitewash, and placed on the outside of the glass on a hot day, will stay on for the season; if its permanency is not objectionable, a thin coating of white paint is as good as anything.

New Holland Plants, Heaths, &c., under glass, will require much attention as to regularity of air and water; any *sudden change* in either is apt to produce mildew. Tie them out as they grow, to make uniform specimens, and stop back any shoots that may push forth stronger than the rest; many kinds seed freely, which is one of the best modes of propagating them. If they are to be stood for the season out of doors, provision should be made to guard them from heavy rains.

IN THE HOTHOUSE much the same attention will be required. The Achimenes and Gloxinia will require a good supply of water, if the soil was as rough as it should be, and the pots well drained. Some of the Achimenes, &c., make better specimens if pinched back a time or two. Any plant that has filled its pot well with roots, and is still growing vigorously, as *Torenia asiatica*, *Pentas carnea*, *Clerodendrons*, &c., may yet receive another shift. Most of these soft-wooded stove plants do much better with guano water once a week—about half a pint of guano to 5 gallons of water.

VEGETABLE GARDEN.—If attention has been paid to former calendars, little remains but to maintain a succession of desired crops. The autumn crops of Cabbage, Brocoli and Cauliflower will require our attention next. A deep rich loam, rather moist and cool, will raise fine crops. In planting out these I make all the holes with the dibble first, fill them with water, let them stand a few hours, and then put in the plants. I do not water afterwards. While they are growing occasional manure water is very advantageous. When the Celery has grown a few inches high, prick out into beds of rich soil in a moist shaded situation; it always does best when thus removed before its final transplanting. It is a very good plan to sow a few Radish Beet about this time, as they will keep much longer good than those sown earlier. The hoeing, thinning and weeding of crops will of course receive constant attention; wherever time can be afforded to apply manure water, most crops will be considerably aided thereby.

T. J.

FRUIT.

In continuation of our remarks on pruning grapes, the next system to be considered is "alternate spurring." This method is an improvement upon close spurring, and may be briefly explained as follows: In close spur pruning it is customary to cut the shoot down to one eye or bud, thus sacrificing more prominent and better developed buds farther from the stem. To obviate this, and at the same time secure the advantages of close pruning, it is becoming a practice with some of our most successful grape growers to select a prominent bud and prune down to it without reference to its distance from the main stem, at the same time cutting out all the eyes below it except the one at the base of the shoot. When growth commences, of course these two buds thus retained will form two shoots, of which the one at the extremity is to bear fruit, the lower one merely to form a shoot to bear next year's crop; if any fruit makes appearance it is promptly removed. The summer management of these is exceedingly simple; the fruit-bearing shoot has its point pinched out two or three leaves beyond the bunch, and all subsequent growth checked in order to strengthen the fruit. The non-bearing shoot is also checked when it has made ten or twelve leaves; and when the fruit is ripe the branch that bore it is cut clean out. The shoot left for next year will undergo the same treatment as its predecessor, viz. pruned to a prominent bud, and cut out all the others except the lower one. This system insures a larger amount of elaborating foliage than is the case with close pruning, and is probably the best that can be adopted where a variety of vines are grown in a limited space; but it is faulty so far that there is little or no extension of the main stem, and also the small extent of foliage tends gradually to impair the longevity of the plant.

On the other hand where permanency is an object, we incline to the opinion that the long cane renewal system is preferable to either of the modes mentioned. We are aware that it is unfashionable at present, and scouted by those who, having a fanciful idea of the great gross feeding propensity of the vine, present it with everything in the shape of manure that can be thought of, and are evidently more impressed with the size of the leaves than the size of the bunches. In the face of all this, and having had our own share in grape management, we will proceed to describe what we consider the best method of grape pruning.

The first year the vine should be allowed to extend almost at random, neither pinching off a lateral or a tendril; this will establish a strong base of roots. In the winter pruning this growth should be divested of all side shoots and shortened to eight or ten feet; the second year this shoot will produce a few bunches of fruit. The leader from it should again be allow-

ed to extend to the extremity of the rafter and then stopped; the side fruit-bearing shoots are to be stopped at the second leaf beyond the bunch, at the same time a shoot is to be encouraged from near the bottom of the cane, not subjected to any stopping whatever. In the winter pruning the shoots that produced fruit are cut clean out, and the two leading shoots cut down to suitable lengths as before. The third season there will be a crop of fruit the whole length of the rafter, but produced on separate canes, viz. the lower portion will fruit on the shoot encouraged from the bottom last year, and the top on the last year's growth of the older cane. The summer pruning now will consist in pinching the points out of the fruit-bearing shoots the same distance as before; all growth should be checked on the lower portion of the old cane, except one shoot to be encouraged from the bottom, and at the winter pruning the oldest cane is removed altogether, and young one takes its place. By this means an old cane is cut out yearly, and a young one introduced. This in practice need not be rigorously adhered to, as the canes can be fruited two or three seasons on spurs.

The advantages to be derived from a system of renewal are, 1st. The young growths that are produced yearly, keep the roots in constant healthy action, in consequence of the large area of elaborating foliage. 2d. The canes producing fruit can be managed on the spur method, and the fruit enlarged by close stopping, without injury to the health of the plant. 3rdly. It is considered that the fruit is less liable to mildew when produced on young, vigorous wood; and 4thly. The cutting out of a cane in winter after the leaves have performed their functions, strengthens rather than weakens the plant. In close spurring the plant will yearly show less and less vigour. On the contrary when managed as above, they will increase in strength, and send forth vigorous growths. This way of managing vines is not new; indeed, it was at one time the prevailing mode, but since the introduction of excessively rich borders, and the consequent production of luxuriant wood, a few heavy crops are produced, even although the canes are cut yearly as smooth as a walking-stick. We confess to having at one time a high opinion of spur pruning, but more extensive observation and experience has fully convinced us of its inferiority. In the case of vines trained under the roof of a greenhouse, or where other plants were in the body of the house, then we would adopt the alternate spur in preference to any other, and even then would introduce a young cane every 5th or 6th year, and cut the old ones out by degrees. Summer pruning and close stopping undoubtedly invigorates the present crop, but is injurious to the plant, unless very skilfully managed. The summer management in this respect also depends very much upon the mode of winter pruning to be followed.

PEACHES. Now is the time to steal a march on the "borer." Remove a little of the surface soil from about the roots of the trees, and if there is much gumminess observable clear it away, and follow up the depredator, and if possible put an end to his life. Prevention is better than cure. It is, indeed, doubtful whether the cutting and paring practised by many in order to find the worm, is not productive of more harm than good. Make a small mound of wood or coal ashes, lime or coal dust, round the stem, which will have a tendency to prevent the insects from doing further injury. Blistered leaves frequently make their appearance, and are generally considered to be occasioned by green fly. We consider these to proceed from sudden and extreme changes of the temperature, having observed its appearance when no fly was visible.

DISBUDDING. Where trees are growing very luxuriantly the extreme points of young shoots should now be pinched out, and any young shoot that makes its appearance where it is not wanted should be rubbed off.—Trees can be managed in this way so as to render winter pruning a trifling operation. We hope to live to see the time when all pruning will be performed during summer.

MULCHING. This is a very important and necessary operation, especially on young and newly planted trees. A layer of short grass, manure, hay or straw, laid over the roots, will prevent rapid evaporation, and keep an equable degree of moisture in the soil, and answer a better purpose than frequent applications of water.

S. B.

GLAZING SASHES WITHOUT PUTTY.—In your "Retrospective View of the Progress of Horticulture for 1852," you speak of a writer in the Philadelphia Florist, who thinks the mode of glazing without puttying the glass, is *new*, and should be called "American." Whether you were the first to adopt it in this country or not, I cannot say; but this I do know, that it neither originated with you, nor with the writer in the Philadelphia Florist. The mode has been practised, to my knowledge, over twenty years in England, and some of the handsomest hothouses in that country are glazed in that manner. I remember a carpenter making a number of hotbed sashes and glazing them in this manner, some twenty years ago; but the gardener for whom they were made, refused to have them, and the carpenter had to take them back and putty in the glass. The system has never found much favor with builders of hothouses, more from a want of a thorough knowledge of the proper manner of doing it than anything else; and I have never employed a glazier in this country to whom I have not had to explain this method of setting glass, before they would commence with the work. The method has

some advantages over our common glazing, as you state in your remarks; but it has disadvantages also; and when the rebates are very irregular, as is often the case, in sashes made by machinery, and especially on curvilinear houses, as generally constructed, the work is bad. In fact, the method cannot be adopted, with any chance of making a good job, unless the rebate be regular and well made. I have, the past year, glazed over two hundred sashes in this manner; and when the work is properly executed, I consider it the best method of setting small sized glass. But the system is neither new nor American; and I am surprised that neither you, nor the Philadelphia Florist, knew this before. Yours, truly, R. B. LEUCHARS (IN HOVEY'S MAG.)
Roxbury, Jan. 1853.

We are very happy to have such a companion in ignorance as Mr. Hovey; we believe that the system was mentioned in his magazine before noticed in this, but we were not aware of it at that time. But if any person has been induced to try a better mode of glazing by what we said on the subject, we care not whether it be American or English, old or new, so that the good cause is advanced.—Ed.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated monthly meeting of this Association occurred on Tuesday evening, May 17, in the Chinese Saloon, Philadelphia, Dr. W. D. Brinckle, V. P., in the chair.

The display on the occasion was one of interest, consisting of many fine specimens of greenhouse plants and esculents, betokening much skill in cultivation. Of the former a few of the choicest might be noticed. In Mr. Buist's collection, shown by Thos. Fairley, foreman, were remarkably well-grown specimens of *Azalea Maitlandii*, *A. variegata*, *Ixora coccinea*, *Alstræmeria bicolor*, *Calceolaria*, *Bletia hyacinthioides*, and a dozen pots of indigenous plants. J. F. Knorr's gardener, John Bell, presented a collection not in competition. A beautiful plant of *Deutzia gracilis*, for the first time shown; *Nierembergia gracilis*, very pretty; *Scutellaria Ventenatii*; fragrant *Cestrum aurantiacum*, *Jasminum gracile*, a dozen Geraniums, as many Cinerarias, and a number of Calceolarias of much beauty. Thomas Meehan, gardener to Caleb Cope, brought *Physurus argenteus*, *Chysis bractescens*, both new, and shown for the first time. *Statice Dicksonia*, rare. *Allamanda nereifolia*, good specimen; *Fabiana imbricata* and *Fuchsia Diadem*. Also, a design and baskets of cut flowers; in the latter was the 105th flower of *Victoria Regia*, from the original plant, and a basket of wild flowers. Isaac

Collins, gardener to the President, had a large and fine plant of *Euphorbia splendens*.

Wm Grassie, gardener to W. W. Keen, West Philadelphia, exhibited a specimen of *Hoya imperialis*, new, and for the first time seen, a magnificent plant; a new Pelargonium called Madame Rosaltii, of peculiar markings; a fine specimen of *Calceolaria magna lutea*, and many other choice species.—James Bisset, gardener to Mr. Dundas, exhibited a fine specimen of *Azalea variegata*, Gloxinia, and other select plants. Adam Uber brought a large collection of Pelargoniums in the finest state of cultivation. A. Parker had a table of native plants. Thomas Meghran, gardener to R. Cornelius, exhibited a handsome design and a basket of choice flowers.

On the fruit table were several dishes of grapes. From Mr. Cope's houses were the white Frontignac and Black Hamburg. From J. Fisk Allen, Salem, Mass., a bunch of his seedling, Black Hamburg and seedling Musque verdel; also the Grizzly Frontignac and Verdelho, parents of the seedling.

And among the extensive collection of vegetables, were Cucumbers, forced Potatoes, Cauliflowers, &c., by Thomas Meghran, gardener to R. Cornelius. Fine Sea Kale, Cauliflowers, Tomatoes, Asparagus, &c., by Thomas Meehan, gardener to C. Cope. Rhubarb, of mammoth proportions, by Samuel Cooper—one leaf and petiole weighing three pounds and three-quarters.—Fine Rhubarb, two kinds, by Wm. Hobson. Wm. Jones exhibited a dish of French Beans, Tomatoes, and Beets. Enormous Asparagus, by J. M. Tage.

Reports of the Committees for awarding premiums on plants and flowers: *Pelargoniums*—for the best and second best, to Adam Uber; for the best six specimens, to Thomas Meehan, gardener to C. Cope. *Tulips*—for the best twelve to Thomas Fairley, foreman to Robert Buist; for the second best, to Thomas Meehan. *Plants in pots*—for the best collection, to Thos. Fairley; for the second best, to Thos. Meehan. *Plant in a pot*—for the best, to Isaac Collins, gardener to Gen. Patterson, for *Euphorbia splendens*. *Indigenous Plants*—for the best display, to Thos. Fairley. *Plants shown for the first time*—to William Grassie, gardener to W. W. Keen, W. P., a premium of five dollars for *Hoya imperialis*, in bloom for the first time in this country, it is believed; and to Thomas Fairley, a premium of three dollars, for a fine collection of Geraniums, exhibited for the first time.—*Bouquet designs*—for the best, to Thos. Meghran; for the second best, to Thos. Meehan; for the best hand bouquet, to Robert Kilvington. *Basket of cut flowers*—for the best, to Thos. Meehan; for the second best, to Thomas Meghran; for the best of indigenous flowers, to the same. A special premium for a fine collection of plants, to James Bisset, gardener to James Dundas, and for a basket of indigenous flowers, to Thos. Meehan.

On Fruits—*Grapes*—for the best three bunches, the White Frontignac, to Thos. Meehan, gardener to C. Cope. The Committee noticed specimens of two fine Seedling Grapes, from John Fisk Allen, of Salem, Mass., which they think worthy of a more detailed notice in their next ad interim report.

On Vegetables—*Cucumbers*—for the best brace, to Thos. Meghran.—*Rhubarb*—for the best twelve stalks, and for the second best, to Wm. Hobson. *Asparagus*—for the best twenty-four stalks, to James M. Tague; for the second best, to Thos. Meehan. *Peas*—for the best half peck, to Thos. Meghran. *Potatoes*—for the best half peck, to the same. For the best display of Vegetables by an amateur, to Thos. Meghran; for the second best, to Thos. Meehan. And a special premium to Samuel Cooper, for a very fine display of Rhubarb, brought in too late for competition. The Committee called the attention of the Society to a dish of French Beans, Plum Tomatoes and Beets, shown by Wm. Johns.

AD INTERIM REPORT.

The Fruit Committee respectfully submit, as usual, an ad interim Report on the specimens of Fruits submitted to their examination since the last meeting of the Society:

From Charles Kessler, of Reading, Pa.—The Pfeiffer Apple—noticed and described in the Report for April, but not then sufficiently mature for testing, has since been examined, and is regarded as of "good" quality.

From John Gorgas, of Delaware—The Freeze and Thaw Apple—grown on the farm of his father, in Roxbury Township, Philadelphia County, Pennsylvania. Size medium; conical; profusely striped and mottled with bright red on a yellow ground, with a number of light dots, and frequently one or more white splashes near the base; stem three-fourths of an inch long, slender, inserted in a wide, deep, acuminate cavity, partially russetted; calyx small, closed, set in a moderately wide, superficial, wrinkled basin; flesh of fine texture, but deficient in flavor, and on that account can scarcely be considered of "good" quality, if the specimens were cut at the proper time. Mr. Gorgas informs us that it may be left on the tree till it repeatedly freezes and thaws, without sustaining injury: hence the name.

From Charles Kessler, of Reading—A Red Apple—below medium size, which originated on the premises of Mr. Hains, of Pricetown, Berks County, Pennsylvania. Form roundish oblate; skin thin, striped and marbled with bright red, and marked with numerous whitish dots near the crown; stem long, rather slender, inserted in an open, deep cavity; calyx large, set in a wide, rather deep, slightly plaited basin; the bright red stripes remain imprinted on the fruit after the delicate skin has been removed; the coloring matter penetrating and partially staining the otherwise whitish flesh, which is exceedingly tender and of fine texture; flavor agreeable; quality "very good."

From Charles Kessler, of Reading—The Speckled Oley—from Oley Township, Berks County, Pa. This Apple is said to be beautiful when in perfection, and usually one-third larger than the specimens sent to us. Size two and a half inches by two and five-eighths; roundish; striped and mottled with red on a greenish yellow ground, and thickly covered with large white dots, most of which contain a russet speck in the centre; stem three eighths of an inch long, by one-tenth thick, inserted in a very narrow, acute cavity, sometimes russeted; calyx small, set in a shallow, furrowed basin; seed long and of a light yellowish brown color; flesh rather dry and mealy, but with a pleasant flavor; being over-ripe, an accurate judgment could not be formed of its quality.

From Charles Kessler, of Reading—A large greenish yellow Apple, with a faint brown cheek; roundish, inclining to conical, and somewhat angular; stem short, rather stout, and fleshy at its junction with the branch; cavity acute, narrow, russeted in the rays; calyx small; basin moderately deep, not wide, furrowed; flesh tender, juicy; as the specimens were over-ripe, the quality could not be accurately ascertained.

From Charles Kessler, of Reading—Newtown Pippin, from Berks County; large; roundish oblong; greenish yellow, with faint broad stripes of red on the side exposed to the sun. Not true to name, and not equal in quality to the genuine Newtown Pippin.

From Mr. Slingluff.—Beautiful specimens of pears, from a tree purchased for the *Catillac*, but which proves to be *Uvedale's St. Germain*. The latter is distinguished from the former in being pyriform; while the *Catillac* is broadly turbinate. Both are valuable only for culinary purposes, and one of them (*Uvedale's St. Germain*) is familiar to us under the name of *Pound Pear*.

From Jonathan Baldwin, of Downingtown.—Pears labelled *St. Germain*; which we regard as not true to name. They were not in good condition when received, and we were consequently unable to test their quality. Mr. Baldwin, however, who is a distinguished pomologist, has expressed so favorable an opinion of the variety, that we have drawn up the following description of it, from the specimens he sent us: large; obovate pyriform; greenish yellow, with a brownish red cheek; stem an inch long by one-sixth thick, inserted without depression; calyx set in a deep, narrow, sometimes wide basin; seed very large; flesh yellowish white, juicy; specimens not in a condition for us to determine the flavor and quality.

From Dr. Bertolet, of Oley Township, Berks County, Pa., through Charles Kessler, of Reading—The Boas Apple, which was introduced into Oley, about fifty years ago, by the Rev. Mr. Boas, of Reading, from Exeter Township, where it is known as the *Kelter*: Medium size; roundish oblate; deep crimson in stripes of different hues, with one or more whitish yellow blotches near the base; sometimes only faintly striped with red on a greenish yellow ground; stem very short and thick, inserted in a moderately

deep, not very wide cavity; calyx set in a plaited basin variable in size and form, sometimes superficial and wide, sometimes rather deep and narrow; core small; *seed very small*, plump, acuminate, greyish brown; flesh yellowish white, crisp; flavor pleasant; quality "*very good*." Said to be a long keeper. Six contributing members were elected. On motion adjourned.

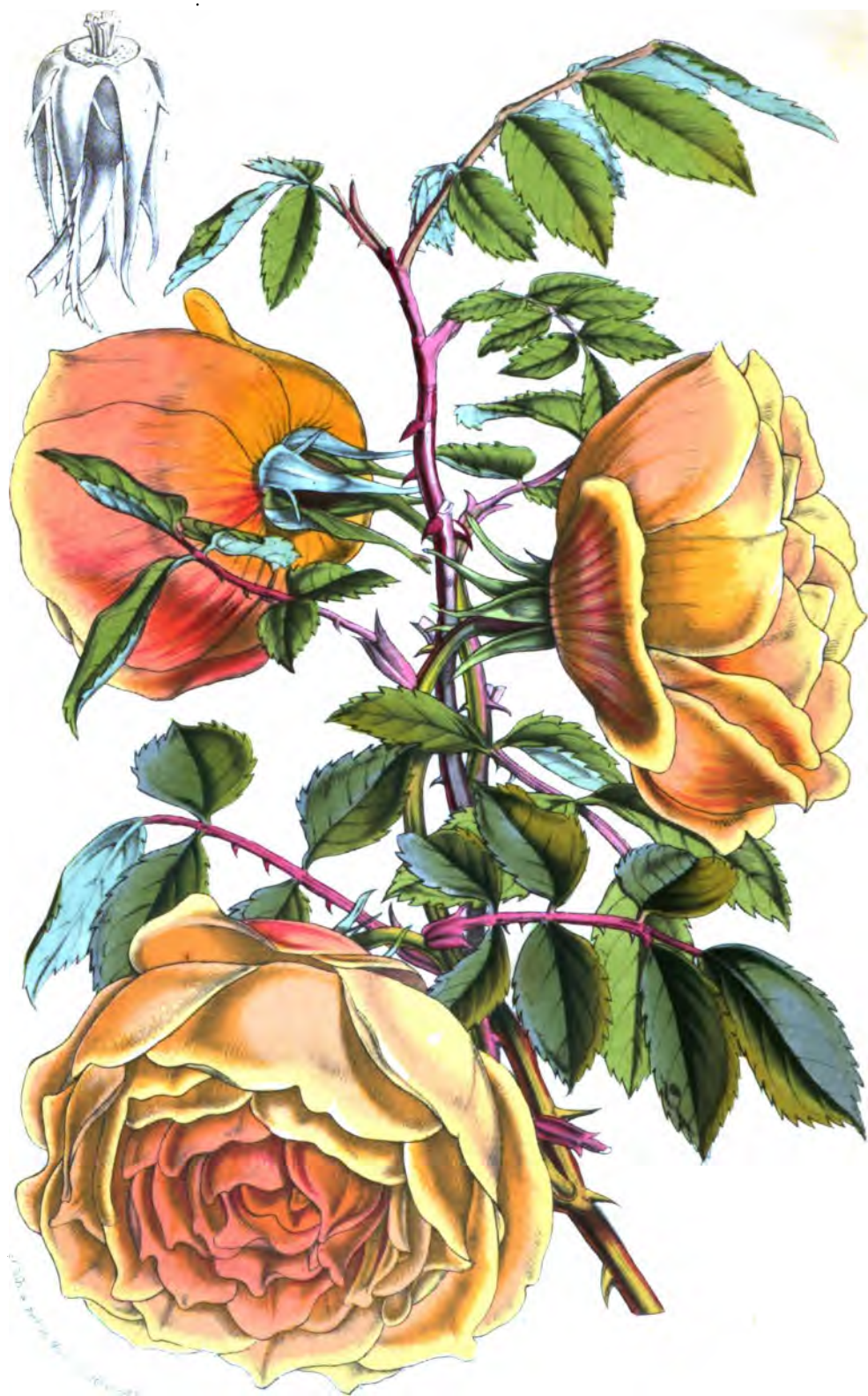
T. P. JAMES, *Rec. Sec.*

THE GARDENERS' SOCIETY.

The second Annual exhibition of this Society, was held in the upper and lower Saloons of the Chinese Museum, commencing on Tuesday, the 10th inst., and continuing open until Friday evening. The object of the association is to form a fund for the relief of sick and infirm gardeners and their families. The weather during the week was rather wet; thus preventing so large an attendance as might have been expected. The upper Saloon and the middle range of tables in the lower Saloon, were occupied by collections from the houses of the amateurs of the city and its neighborhood. Beautiful specimens of the exotics which are cultivated here, from the tall and graceful *Acacia*, to the humble *Lycopodium*, with its beautiful shades of green, the rare Palms and Conifers, the singular and gorgeous Orchids, all added to the display. From the principal nurseries around were displays of blooming plants for sale; at this season the roses make the most interesting display. The *Calceolarias* and *Cinerarias*, from Mr. Richardson, of New York, were on a side table, and were much admired. Among the new and beautiful plants exhibited were *Saccolabium guttatum*, an Orchid in Mr. Dundas's collection; and two beautiful specimens of *Cattleya* from that of Dr. James Rush. Mr. Ferguson, of Laurel Hill, had a fine plant in bloom of Fortune's double yellow rose, which has been condemned by most of our gardeners; but this specimen went some way towards changing their opinion of it. Taken altogether the display was a very creditable one, and we hope that the funds of this useful institution were benefitted by it.

Mr. J. F.—We are sorry to have offended you, but we cannot expect to please every one—we must do the best we can; the fact of all your communication not being published, does not intimate that it was not worthy. The editor is certainly young, but as you have made more sound on this occasion than we have, we really don't see the application of your remark about empty vessels. We cannot return communications, as we do not preserve them; it is not the rule of any paper to return them.

ERRATA in Garden Memoranda, p. 117. In the notice of Bartram, for "*Quercus alba*, 13 feet in circumference and 5 feet high," read 85; and for "*British Oak*, *I. pedunculata*, 7 feet in circumference and 3 feet high," read 88.



Fortune's Double Yellow rose.

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NOTES FOR THE WEEK END OF NOVEMBER 28.

The command `getenv` returns a pointer to a null-terminated string representing the value of the environment variable `name`. If `name` is null, the function returns a pointer to the environment.

"The Rose-plant yields a great deal of an accession," writes Mr. Norton to Messrs. French & Noble, having discovered by him in the garden of a friend an individual of the above variety covered all over with white. At first we often visit the following names of its variety and colour: flowers, "white, the rose, yellow and other." The name of the plant is *Rosa* for variety, however, the flowers, however, may be white in color, a circumstance that may be an advantage as to the beauty of the bush. I have collected a few of the known varieties, and I am, in fact, the only one. It is admirably adapted for covering the walls of a house, especially in the north of the soil permits it to be used in development and reveal all its beauties." * * * * * Now that the enlightened culture of Messrs. French & Noble has given it all the advantages, there is no doubt but that it will take a distinguished place among our flowering roses."

To understand a part of this history, we must be told that, when this rose first flowered in England, it was the mark of a bad system of cultivation, it showed itself in a bad soil, took a bad reputation, and judged by those first appearances, it was called a slip-flowering, and the "Gentle" name was given to it. From this judgment Messrs. Standish & Noyes have completely repudiated. Thanks to their system of culture, the flowers are now in abundance, the color like flowers of which we have seen before, says Sir W. Hooker.

not fully satisfied with the results, and who is concerned to a great deal of an extent with the matter, a tint of redness



THE FLORIST

AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, June, 1853.

[No. 6.]

FORTUNE'S DOUBLE YELLOW, OR WANG-JANG-VE ROSE.

The common name of this rose indicates with sufficient clearness its origin. The following details will make known both its history and its merit as an ornamental plant.

"The Rose about which you ask of me an account," writes Mr. Fortune to Messrs. Standish & Noble, "was discovered by me in the garden of a rich mandarin at Ningpo. It entirely covered an old wall. At the time of my visit the brilliant masses of its yellow and salmon flowers produced the most wonderful effect. The Chinese call it *Wang-jung-ve* or yellow rose. Its flowers however, vary somewhat in color, a circumstance to my taste, very advantageous to the beauty of the bush. I thought it distinct from all known varieties, and certainly from all those of China. It is admirably adapted for covering the walls of a garden, especially if the richness of the soil permits it to attain its full development and reveal all its beauties." * * * * "Now that the enlightened culture of Messrs. Standish & Noble has given it all advantages, there is no doubt but that it will take a distinguished rank among our flowering roses."

To understand a part of this last sentence, it must be known that, when this rose first flowered in England, on account of a bad system of cultivation, it showed itself much inferior to its reputation, and judged by these first appearances, was considered as shy-flowering, and indifferent in shape, in size and in color. From this judgment Messrs. Standish & Noble can happily appeal. Thanks to their system of cultivation the bush produces in abundance these beautiful flowers of which the original colors, says Sir W. Hooker, cannot be faithfully reproduced in painting, and which is compared to a ground of amber delicately washed with a tint of carmine.

The flowers of this rose not being known but in the double state, it is almost impossible to determine botanically if it was derived by way of seed from a wild species or a cultivated variety, or whether it is the product of hybridization. The question must therefore rest, until more ample information is obtained.

J. E. PLANCHON.

The judgment of American rose culturists has been hitherto unanimous against any merit in this rose; perhaps proceeding from the same want of proper culture from which it suffered in England. Messrs. Standish & Noble say that the want of success of the first attempts in its cultivation proceeded from the fact that the shoots were shortened in as for ordinary standard roses. To diminish the branches of one year, is to take away the bloom; as with this, as with the Persian Yellow and Banksian roses the flowers are borne on the wood of the preceding year. The number of the shoots must only be diminished, and the rest not at all shortened. With this simple precaution, joined to the choice of a rich soil, the plant becomes very free-flowering."

The Horticultural editor of "The Soil of the South," a valuable paper published at Columbus, Georgia, in the last issue says of this rose, "This gem of the Celestials has opened its petals and is more than we ever dreamed of in beauty; though not as large as the La Marck, or quite as double, it is of the most exquisite yellow. The Cloth of Gold does not compare with it. It is a free grower, having already made wood four feet long this season." After such praise it cannot be so utterly worthless as some have represented it to be.

Ed.

NOTES ON ROSE CULTURE,

BY A LOVER OF ROSES. (Continued.)

To those who are entirely unacquainted with the true color, hardness, quality, &c., I conceive the following will make a fine assortment, laying aside all puffs of sellers, growers, and catalogue makers—age or price. I may also be allowed to begin with the family that I am most partial to; although I grow more than 50

sorts I am satisfied that two thirds of them are quite *dispensable*, reducing them to a dozen and a half: admitting these, we have left the following very desirable sorts of Bourbons:

Acidalie, nearly white.

Desgaches, satin rose.

Dupetit Thouars, bright crimson.

Desfosses, waxy pink.

George Cuvier, large carmine.

Henry Clay, large, bright rosy red.

Hermosa, pale rose.

Lavine d'Ost, waxy pink, in large clusters.

Leveson Gower, large, pale purplish rose.

Madam Angelina, creamy white.

Madam Newman, large bright rose, very fragrant, does not open well in the early part of the season; often called monthly cabbage.

Mrs. Bosanquet, creamy blush.

Paul Joseph, bright scarlet, crimson.

Prince de Joinville, purple crimson.

Queen of Bourbons, creamy blush.

Souvenir d'Anselm, or *Enfant d'Ajaccio*, bright red, fragrant, and a good climber.

Souvenir de la Malmaison, very large, blush, with a pink center.

Vicomte de Cusey, very large, rosy carmine.

Some, I dare say, will think that their favorites are left out, but amongst so many there are numbers similar; Hermosa, Pierre de St. Cyr, Herseline and Marianne, are all pink colors. So are the following bright crimsons, Souchet, Dupetit Thouars, Julie de Fontenelle, Prince de Joinville, Deuil du Duc d'Orleans, and splendens. Madam Desprez, Marquis d'Ossay, Lavina d'Ost, and Madam Aude are also in close family likeness. Those who wish a few good climbers with Souvenir d'Anselm, should add Bouquet de Flore, Lady Canning, and Triomphe de la Duchere. Many admire Gloire de Rosemene for a climber, but it is so simple in its blossoms; though its profuseness of bloom and brilliancy of color in some degree compensate for its deficiency of form. If the Bourbon roses had only more fragrance (which few of them have) they would be the general favorites of all rose lovers, for they combine every

color, are constantly in bloom and very perfect in form, and whether grown as dwarfs, standards or Pillar plants, they are beautiful the whole growing season.

TEA ROSES. These possess all the fine characters of beauty and fragrance, but are very deficient in variety of colors, being nearly all white to deep rose, no reds nor crimsons. Another drawback upon their general garden culture with us is their tenderness. They must have a dry sheltered situation, and be well protected in winter with brush, leaves, litter or cedar branches. My best plants are on a mound where they are entirely shaded from the sun in winter, and I assure you they command much admiration, and my friends esteem them above all others for their delightful perfume. Nothing that I have yet seen can compare in that with the magnolia rose, its fragrance is not excelled by any. There is one drawback to the general culture of this class of roses, they are rather delicate and are often killed to the ground; in this vicinity they must have very rich, light sandy soil, keeping them moist in summer and dry in winter. We grow over 40 sorts, many of them very similar, and a few not worth notice compared with the following, that are very splendid.

Adam, flesh color, very large and pendulous, rather tender.

Antherose, very large, creamy white, a strong hardy grower.

Bougere, waxy blush, very large, blooms best in warm weather, a strong grower and hardy.

Caroline, bright pink, large flower.

Comte de Paris, very like Bougere, but paler, and of the finest formation.

Devoniensis or Magnolia Rose, creamy white, with a pink center, large, and peculiarly fragrant; I do not think there is a rose of more agreeable odor; rather tender,

Hippolyte, white, a strong grower and profuse bloomer.

La Sylphide, creamy buff,

Madam Bravy, pure white, very large.

Mareschal Bugeaud, salmon color, a strong grower.

Maria, large, bright pink.

Safrano, beautiful orange, desirable for its bud only, for when fully expanded it is very simple.

Souvenir d'une Amie, an improvement on Princess Maria, a strong grower of a rich rose color.

Triomphe de Luxembourg, large, salmon color, desirable for its free growth and profuse bloom in hot weather.

Vicomte de Cazes, bright yellow, of rather weak growth very distinct.

There are several others of equally fine character and beauty that are nearly related to some of the above; for instance, Madam Willermoz, Nephotos, and Clara Sylvain are three fine whites. La Reine, Goubault, Moire, and Lyonnais are all fine, and approach Mareschal Bugeaud or Triumph of Luxembourg. I succeed admirably with the Tea Roses budded on low strong stocks; they are more hardy, make fine strong growths, and their heavy pendulous flowers are kept from the ground; being convinced of this, I am endeavoring to have them all on stocks about 18 inches or two feet high. Those who grow them in more favored climates should procure them all on their own roots or budded very low.

[*To be continued.*]

LESCHENAULTIA FORMOSA.

This although by no means a rare plant, is very rarely seen in good health. To produce it in perfection requires a little more careful treatment than is given to an Abutilon or a Salvia. There is no real difficulty in the management of New Holland plants, provided a proper course of culture is pursued. Although the weather is neither brighter nor warmer here than in many parts of Australia, still it is found necessary under artificial treatment to shade and protect them from the direct influence of the natural atmosphere at certain seasons. It is too much a practice to treat all plants alike. Have you got all your plants out yet? is a question frequently asked about this time, and one I cannot understand. In a collection of greenhouse plants at all worthy of the name, a constant change and re-arrangement is requisite, some requiring full exposure to the atmosphere, others young and tender requiring artificial atmosphere suited to their conditions. The *growing* season even in the most arid and warm climates is characterised by frequent rains, and still

moist atmosphere. The approach of the *dry season* induces maturation of growth. The aridity of the air and intense heat of the sun, solidifies the tissue to a degree seldom attainable under artificial cultivation, and vegetation is thus enabled to withstand extremes both of heat and cold. Hence plants of Acacias, Hovea, Eucalypti and others, in their respective countries are subjected to many degrees of frost without injury.

In greenhouses, circumstances are widely different; although much may be done in imitation of this natural treatment; by a gradual withdrawal of water during autumn, until a perfect state of rest was induced, I have subjected many hothouse plants to a few degrees of frost without any apparent injury. Under similar treatment orange trees have been subjected to 12 deg. of frost and remained unhurt.

It is obvious that proper treatment during the growing period is the most important item in the culture of exotic plants. One man will set his Camellia plants out of doors while they are making a growth, the young shoots are dried up; an effort to a second growth is made which is not properly matured, and flowers are produced sparingly if at all. Another will keep his plants in a somewhat shady house, well supplied with atmospherical moisture, until the young shoots show symptoms of ripening. Exposure to a drier atmosphere at this period will still further check growth, and consequently favor a disposition to form flower buds. I have repeatedly observed that the most healthy and vigorous camellias and at the same time producing the greatest quantity of large well-developed flowers, were never exposed to the full influence of the weather. still it is not a tender plant. Planted in the open air in this latitude, it proves as hardy as the common Kalmia and Rhododendron, and has stood unprotected for the last nine years.

There has been too much importance attached to the empirical composition of soils, under the supposition that each kind of plant required a peculiar combination of earths to maintain a healthy existence. I am not aware of the facts upon which the supposition is founded. If we take nature for our guide we will find plants growing with equal luxuriance upon soils of a widely different character. I apprehend that skilful culture depends much more upon the physical condition and arrangement of the soil, and its relation to air and water. Some plants affect a dry and exposed locality,

others luxuriate in situations where these conditions are reversed. An interchange of soils would not be followed by any striking difference but any attempt to grow the upland plant in the wet, shady bottom, would prove a decided failure.

The principal feature in the culture of the *L. Formosa* is to secure it a shady, moist situation, in early summer, and protection from drying winds. A situation such as I recommended for *Heaths* at p. 39, will suit it admirably. In fact the whole tribe of New Holland and Cape plants, as *Boronias*, *Epacris*, *Ericas*, *Pimelia*, *Eutaxia*, &c., require similar conditions while growing. When growth is completed freer exposure will then be beneficial. These points of culture are generally recognised by practical cultivators. It is quite possible to keep plants alive under careless or indifferent treatment, but those who desire to see their plants in vigorous conditions, will not consider that a few months protection during winter is all that a plant requires. With some, "A plant's a plant, although there's no life in't."

* A fibry, sandy soil, largely mixed with pebbles, charcoal, &c., to insure porosity, seems a suitable soil for all greenhouse plants, the present subject included—thorough drainage is indispensable. A well drained turfy soil, protection from cold and arid winds, and picking off all flower buds while growing, watering only when the plant requires, and judicious pruning to form a handsome plant, will insure one of the most beautiful of greenhouse plants, both in foliage and brilliancy, and retention of its flowers. During winter it requires a season of rest, and should then receive a minimum supply of water, otherwise a sickly yellow foliage will be the consequence, and an irrecoverable diseased condition will inevitably follow.

WM. SAUNDERS.

BALTIMORE, June 3, 1853.

MANAGEMENT OF THE NECTARINE.

DEAR SIR:—If the "Florist" had done nothing since its commencement besides directing attention to the advantages of summer pruning, many of its readers would be amply rewarded. I am not

of opinion that winter pruning will ever, or ought to be, entirely superseded ; but in our country it will certainly do so to a very great extent. Summer pruning, by reducing the quantity of foliage, checks luxuriance, and induces fruitfulness ; while winter pruning, especially if effected early, lessens the quantity of wood to be supported by the roots, and thus induces a luxuriance not to be otherwise obtained. Without entering into the physiology of this matter which will be apparent to all acquainted with the functions and offices of leaves, wood, and roots, I will proceed to detail the manner in which I apply the principle in the cultivation of the nectarine.

Suppose the plant to be one year old from the bud, and required to be planted against the back wall or trellis in the nectarine house ; I should have it planted immediately after the fall of the leaf, and cut down at once to three or four good eyes above the place of working, or bud. By this I should get three very luxuriant shoots the following year, to form the skeleton of the "fan" on which form to train it. Fruit for the first three years of the life of the tree is a secondary object, the chief one being to obtain a vigorous tendency ; therefore, the shoots obtained from the first year's winter pruning are suffered to grow as much as they will, no "finger and thumb" work is employed, every leaf and stem is carefully preserved to aid in collecting material for the strength of the main branches. A very common idea is, that "strong shoots are robbers." No such thing—every leaf and branch above a given point on a tree strengthens that part which runs below it. After the fall of the leaf, the last year's growth is cut in to within a few eyes of the former year's growth, as that season's had been done before it ; and the following season's growth will require the application of the principles of summer pruning. An eye will then have to be kept to the desired form of the future tree ; and after selecting such shoots as they burst forth, to be retained, the remainder, that are not required, are taken out entirely—"disbudded." This is the only season in which I practise disbudding, or removing shoots *entirely* that are not wanted the next season. Thus, the third winter, provided soil, water, and other circumstances have been favorable, we have a luxuriant, healthy tree capable of bearing fair crops of

fruit for half a century. Wherever more wood is required, the shoots in the immediate neighbourhood are shortened; the rest, designed to bear fruit, are left their full length. When the leaf buds burst the following spring, I carefully note what shoots are required for fruiting purposes next season; and when those I do not require have pushed about six or seven leaves in length, I pinch them back to about three, so that my trees are covered the whole season with shoot-like spurs, each bearing about three leaves. Sometimes, if very luxuriant, the pinched off shoots will burst again, when these secondary ones are pinched back to one, or taken out entirely, especially if at the top of the tree. These stopp'd off shoots never increase much in diameter; their leaves are employed in strengthening the trunk, or in the formation of leaf buds. It is curious to see them, if left till the spring, covered with spurs, giving the tree at a distance the appearance of a Plum. These are however, mostly cut off in the winter pruning, which cutting back of spurs is the only winter pruning they generally receive. Sometimes a tree from overbearing, or some other cause becomes weak; in that case as little summer pruning as possible is performed. From our trees, extending along the back wall of the nectarine house 70 feet, my winter prunings would not fill a bushel measure.

It will be observed that my system does away with two things, very generally followed in nectarine management, namely, *winter pruning*, and summer or spring *disbudding*—it is now pretty well understood that if wood be the object and not fruit, prune in the winter; on that score the advantage of my system will be apparent.

The evils of disbudding are also being perceived by cultivators, the trees receiving a very injurious check from the sudden loss of such a mass of foliage. This has latterly become so apparent, that all good cultivators take several days for the operation, taking off but a few each time. This system does away with this disadvantage also. In fact it seems to me to be as perfect as possible. Those who have seen the specimens of fruit that obtained the society's highest prize last September, will bear witness to the equality of the fruit, and I shall be happy at any time to exhibit the health and

beauty of the trees to any who may pay a visit to Sprittgbrook for the purpose of seeing trees managed on this system; trees too that I had been advised by experienced horticulturists in times past to get removed, because they were believed to be worn out and "done for." The system is, of course, equally applicable to the Peach.

THOMAS MEEHAN.

The Gardener's Chronicle extracts from a new work on the vegetable cell by Von Mohl, the following remarks relating to the longevity of vegetation, which contain so much information, that we should consider ourselves as defrauding the readers of the Florist, if we did not copy them into its pages.

"The peculiarity of their organization, and the unlimited power of growth of plants, offer many difficulties to the definition of the duration of plants, and have given rise to many incorrect theories. Every individual cell, and every individual organ, has a determinate end to its life; but the entire plant has not, since the individual shoots run through their periods of development quite independently, and only share in the weakness of age of the older organs when these are no longer able to convey to the young shoots the needful amount of nourishment, in which case the latter do not die from deficiency of vital energy, but are starved. It therefore, depends wholly upon the mode of growth of a plant whether this occurs or not. When a plant possesses a thallus spreading horizontally by the growth of its circumference, it can annually extend itself into a larger circle, after the old parts in the centre have been long decayed, as is seen in old specimens of crustaceous Lichens, in the fairy rings caused by fungi, &c. In like manner when a higher plant has a creeping stem, and possesses the power of sending out lateral roots near the vegetating points, and in this way conveys nourishment directly to the young terminal shoots, the latter are wholly independent of the death of the older parts of the stem and of the primary roots, and there exists no internal cause for death in such a plant. It is truly a different plant every new year and vegetates in a new place, but there is no definite boundary between it and its predecessors; such a plant is like a wave rolling over the surface of a sheet of water; it is every moment another and yet always the same. Thousands of inconspicuous plants, of Mosses, Grasses, Rushes, &c., have vegetated in this manner upon peat bogs and similar localities perhaps for thousands of years. Plants with upright stems are placed in much more unfavourable circumstances. It has been declared of these also, and particularly of the Dicotyledonous trees (Dz

CANDOLLE, 'Physiologie Vegetale,' ii. 984), that they have no internal cause for death, but I believe incorrectly. Examples of very old trees, such as DE CANDOLLE collected (*e. g.* *Taxus* 3000, *Adansonia* 5000, *Taxodium* 6000 years old, &c.,) only prove, naturally, that death occurs at a very late period in many plants placed in favourable circumstances, but not that it does not necessarily happen. To me there appears to exist in all trees, whether they belong to the Dicotyledons, or, like the Palms, to the Monocotyledons, an internal cause which must produce death in time—namely, the increasing difficulty of conveying the necessary quantity of nourishment to the vegetating point, resulting from the elongation of the trunk from year to year. Even when the force which carries the sap up suffices to raise it to 200 feet or more (many Palms, as *Ceroxylon andicola*, *Areca oleracea*, attain a height of 150—180 feet; some Coniferæ, *e. g.*, *Pinus Lambertii*, *Abies Douglasii*, of more than 200 feet), yet a maximum is reached there, and the terminal shoot is less perfectly nourished every succeeding year, becomes stunted more and more, and the tree at length dies.

"If we are surprised at the intensity of the vegetative force of individual plants, in consequence of which it re-appears with new, unweakened energy in every bud, so must we marvel at the force committed to so simple an organ as a cell is, if we reflect what an influence it exerts upon the total economy of nature, as one of the grandest of phenomena. The plant lives almost solely upon inorganic substances; its cells are chemical laboratories in which these are combined into organic compounds. The plant prepares in this way not only the nutriment required for its own development, but also the food on which the entire animal kingdom depends. But plants not only nourish animals, they maintain the air in a fit state for their respiration, since their breathing process removes carbonic acid from the atmosphere and replaces it by oxygen gas.

"In all these functions the plant is thoroughly dependant upon the outer world; its food is brought to it without its own co-operation, by water and air; its respiration takes place without activity of its own, through a penetration of its substance by gases with which it is in contact, in consequence of a physical law; not even does its internal circulation of juices depend on a mechanical activity of a circulating system; thus every necessity for motion is removed. It is true we here and there meet with movements in this or that organ, but these, occurring isolated in the vegetable kingdom, are also altogether of subordinate kind in the individual plant. They also are committed to the cells. * * * * *

"Thousands of experiments," (says Professor Mohl,) "have shown that the young shoots of old trees, when used as grafts, slips, &c., furnish as strong plants as the shoots of young trees; even in the Palms (*Phoenix*

dactylifera) experiment has shown that the apex of the stem, when its vegetation begins to slacken in an old tree, grows again into a strong tree when cut off and planted in the earth. Not one single experiment speaks in favour of the opinion promulgated by KNIGHT, that all parts of a tree have a common end to their life, and that the different trees which have been raised from one and the same tree by grafts, decay about the same time as the parent plant. A whole series of cultivated plants (I will only mention the Vine, the Hop, the Italian Poplar, and the Weeping Willow) are propagated by division, without any decreased power of vegetation ever being seen. Nothing was in greater contradiction to the laws of vegetable life, than the frequently expressed opinion, that the Potatoe disease of recent years was to be ascribed to a degeneration of the Potatoe plant, arising from the unceasing propagation by tubers."

THE ROSE "KING OF THE PRAIRIES."

KENSINGTON JUNE 10, 1853.

Dear Sir:—On a visit to Baltimore last week I was presented with a flower of the above Rose by Mr. Samuel Feast. He says that this is the third time it has bloomed with him, and is a source of pleasure to him every time it blooms. As its name imports, it is the King of the Prairie roses, being superior to any of the other varieties of its tribe; having the fragrance of the Damask; form cup shaped, colour bright peach, darker in the centre, bud of a long conical shape which at the opening of the flower is beautiful. Mr. F. says that, as it opens it shows a few small petals of a lighter colour. The outer petals, twenty-five in number, are of a fine form, slightly turning back, which gives the rose a globular shape until fully expanded.

It is superior to Prairie Queen in every respect except in growth, as far as I could see, and even in that Mr. F. says it equals it; there were some shoots at the time I saw it, which appeared to warrant his assertion; but every body knows him, consequently we take his word for it; but I am satisfied that the flower is sweet, and is larger and more pleasing to look upon; all the others are either destitute of fragrance or are somewhat offensive to the smell. In fine, for a rose which is required to cover a large space in a short

time, and which lacks none of the qualities of a good rose, the King of the Prairies is the only one I have had the pleasure of seeing.

Truly Yours, JAMES RITCHIE.

NEW OR RARE PLANTS,

FLOWERED FOR THE FIRST TIME AT SPRINGBROOK, THIS SEASON.

NO. VI.

RHODODENDRON GIBSONII. This is a very peculiar looking species. The foliage and appearance of the plant are such as we might imagine a cross between *R. ferruginea*, and *R. punctatum* to produce. The flowers are larger than the finest *Azalea indica alba*, and so much resemble it, that we have to look for its small, almost absent calix, before we are sure that it is not an *Azalea*. There is a *greenishness* in the throat, and a pink tinge on the outside of the corolla which the white *Azalea* has not—its habit is straggling, and the flowers only appear in threes. It is worthy of a place in all collections from its peculiarity as a *Rhododendron*—it thrives well with me in a sandy loam with a little leaf mould, in winter kept just above freezing, and always in the shade.

EUPATORIUM CANESCENS. If any recollect the old *Ageratum Mexicanum*, they will have an idea of this plant; it is different from that in its foliage and the flowers are more numerous and compact. It is a very free bloomer, and will grow well in any ordinary treatment. I have no doubt it will prove a valuable addition to our stock of white flowering plants for bedding out—our plant was obtained from Mr. Buist.

SIPHOCAMPYLOS NITIDUS. A *miniature* species with deep green shining leaves, not over an inch in length, and flowers about the same length, and of a bright yellow and scarlet colour, appearing from the axils of the leaves of the young growth. It is not a showy plant, but when grown as a *Centradenia*, with numerous shoots and bushy, would be considered pretty. It is easily grown, but is a "rare old plant" for the red spider—obtained through Messrs. Hogg of New York.

DENDROBIUM DENSIFLORUM. This fine orchid has lately bloomed in several collections in Philadelphia. The flowers come out in clusters of about twelve flowers, each about the size of an ordinary bunch of grapes. Each flower is three quarters of an inch across, of a deep orange yellow—the lip is nearly circular, and finely fringed. It is easily grown in a moist partially shaded atmosphere, in pots or baskets of moss, old bark, and broken charcoal, and in a temperature of 60°—introduced from Low of Clapton.

PHAIUS ALBUS. A fine terrestrial orchid imported last year from Messrs. Loddiges by Mr. Cope. The flowers are white, terminating the young growth. Its color renders it desirable, but it is much inferior in beauty to *P. Wallichianus*, or *P. grandifolius* (*Bletia Tankervillei*). If the latter were white, it would throw our present species far into the shade. It grows well with me in mossy fibry peat in the orchid house.

CATTLEYA FORBESII. Another orchid that has also bloomed in Philadelphia collections. It is inferior in beauty to most Cattleyas, but yet a handsome orchid. The sepals and two lateral petals are green; but the lip larger than a good sized thimble—is of a yellow color, striped and netted with an orange brown. It grows well on a block of wood, slightly covered with coarse moss in the orchid house—imported last year by Mr. Cope from Messrs. Loddiges, THOMAS MEEHAN.

NEW PLANTS IN BLOOM AT MR. J. F. KNORR'S, IN WEST PHILADELPHIA.

DELPHINIUM *Beauty of Charonne*. This truly beautiful hybrid was shown in bloom at the April meeting of the Pennsylvania Horticultural Society, by Mr. Knorr's gardener, it is now in bloom for the second time in his garden—for size of flower and excellence of color it is unequalled; the color being fully equal to that of *Salvia patens*.

NEW ROSES. *Marbree d'Enghien*. This annual rose, having the habit of *Harrisonii*, was imported from Mr. Van Houtte in the winter of 1851-2—it bloomed then and was planted out—this year its bloom has been very abundant, and fully equal to the figure in "*La Flore des Serres*." Its color is salmon marbled with lake. It is semi-double and not of long duration—our hot suns are doubtless very prejudicial to its beauty.

***Narcisse de Salvandy*.** A new monthly rose, of a deep crimson colour, veined and margined with pure white—a very curious rose, and an attractive one.

GLOXINIAS. An excellent collection of these charming plants is in flower—we notice, *Maria Van Houtte*, and a large pale blue seedling, raised by Mr. James Bisset—among the new varieties, *Fyfiana grandiflora*, the best formed one yet seen, with a glossy dark purple throat; *Franklin*, a white, striped in the throat with light purple—*Alex. Werner*, a fine pink, *Wendlandii*, having leaves variegated with white and small light purple flowers—several other novelties are coming into bloom which we will notice in future numbers. A number of the German daisies, imported last fall from Mr. Van Houtte of Ghent, are in flower—among them are some very fine quilled and fringed white, and one white variety with petals equal in shape and imbrication to a fine *Camellia*. The variegated sorts are equally attractive.

THE FUCHSIA.

When well grown, few plants are more admired than the Fuchsia; or, when well selected with regard to distinctness, make a better display on our exhibition tables; and yet, if we may judge from what are annually brought under our notice, growers seem to have paid and are still paying little attention to its cultivation. On all sides improvement in other things is manifest, each season being an advance on the preceding one in this respect, but the poor feeble and attenuated Fuchsia appears to be an exception. I well remember at the exhibitions of a society held at Wanstead that for years the Messrs. Fraser periodically staged collections of Fuchsias, which at that time were fair examples of growth and skill; they were short-jointed, well-furnished with bold foliage, compact pyramidal, and abundantly flowered; these are the kind of plants one expects to see on a show day. I would ask, has a single specimen been shown of late combining these requisites? At the Surrey Zoological Gardens, and at the Vauxhall shows there have been at one time not less than perhaps a dozen collections, numbering at least 100 plants, and I may safely assert that scarcely one of that number could lay claim to fine growth; large plants are not what is wanted, if obtained at the expense of all other necessary points. As a beginning, give us plants say two feet high and about the same through, free, and unrestrained, well furnished with branches and laterals at close and regular distances around the centre stem, and these so short-jointed and clothed with foliage that a comparatively solid bush is presented; then, and then only, may we expect to find a plant proportionately and adequately flowered. Contrast with the above a Fuchsia, feeble and elongated, say in an 11-inch pot, with a stake some five feet in length stuck in the centre; it is tied to this stake at intervals of every nine or twelve inches; at a goodly distance above the pot a stray side branch protrudes, at the end of which some five or six flowers may be seen weighing it down to the rim of the pot as a resting place. Other branches, of the same description, may be found further up the stem, on the summit of which is a drooping tuft of flowers; and this is a picture of a modern grown Fuchsia. I could wish to see closer attention paid to differences of constitution in Fuchsias; this is a point more especially to be considered now, when the trade is sending out new varieties. The soil, for instance, should not be all of one consistence; for what will suit one sort may not answer another. Peat, loam, leaf-mould, and silver sand should be the ingredients of your mixture, which should be made suitable to the wants of the particular plant you are potting, rather than to answer the whole collection; for varieties, naturally robust and vigorous, would starve on a diet which would surfeit less robust kinds. Fuchsias may with propriety be divided into two classes — the one, dark-wooded and slender in habit, with a disposition to form long joints; the other

soft-wooded, *i.e.* green, robust, and short-jointed. Is it not wrong, therefore, to pot these differently constituted plants in the same mixture?

Suppose a few spring struck plants, in 2-inch pots, to have been lately received from some nurseryman, and that a shift is necessary; before you commence, separate your plants into the two classes above alluded to—probably the first, or dark-wooded, will consist of the Gem of the Season, Commodore, Perfection (Banks), Cortona, Nil desperandum, Dr. Lindley (Banks), Grandis, Verrio, Clapton Hero, Splendissima, Ajax, Miranda (Turner), Scarletina reflexa, Dr. Smith, &c., &c.; while the soft-wooded kinds may include Lady Emily Cavendish, Amy, Empress, Hebe, Nonsuch, Napoleon, Joan of Arc, Ariel, Gigantea reflexa, Beauty of Deal, Dr. Grosse, Expansion, Esteem, Prince Arthur, &c. When so separated, give the former nice light compost; the latter, stronger ingredients; and the slender-habited varieties should not receive so liberal a shift as their more robust associates. A cooler situation should also be given to sorts of naturally slender habit; while to the stronger kinds, heat, moisture, and a stiffer compost may be afforded; and thus, by assimilating the treatment to the wants of the plants, better results will be attained than we have lately been in the habit of getting. As to the routine of after culture, it is not my wish to enter, but the grower who considers well before he acts will not be at a loss to manage that part of the business. Let us hope, after this notice, to see Fuchsias brought forward in better condition than we have ever hitherto seen them.—J. E. (*Gard. Chron.*)

RESULTS OF TILE DRAINING.

Messrs. Editors:—As you have published John Johnson's account of his success in under tile draining, you may also in corroboration tell your farmers that a miller here says that the only perfect white wheat he has bought this year was the crop of this same John Johnson, grown on those tile or pipe draining fields. Owing to the amelioration of the soil by draining, the wheat ripened a fortnight earlier than that of his neighbors; its rapid growth completely distanced the insect; yet the uninitiated farmer would say, after viewing the rolling surface, that it needed no drains.

Our farmers generally at this time grow the Mediterranean wheat, which ripens early and escapes the fly; but it will not make extra or good family flour. The result is that our millers can no longer depend on this once famed wheat country to supply them with the *de quoi* to make good flour. But I am glad to say that hundreds of our best farmers are beginning to try Mr. Johnson's experiment. Our tile maker, Mr. Whartenby, cannot now begin to burn his kilns as fast as the pipe and tile are required. He will work another machine this summer, and increase the number of his kilns.

Your leader of the 1st May, in reply to professors of chemistry, was to the point. It would seem as though the Almighty denied rain to the Peruvian Islands, to fit them for the store houses of nitrogen, to supply its waste in the other portions of the globe. It does not take half a chemist to discover that Guano is more strongly azotised than any other animal excrement, and that it contains less of the phosphate to its azote (nitrogen) than any other known manure, not chemically prepared; hence the assertion that "Guano is chiefly valuable for the phosphate of lime it contains," may seem strange, if not *outré*, coming as it does from a man with a handle to his name. But it is no argument to invalidate the capacity of the man, for I presume there is not a professor in our land worthy of the name, who will not confess at the age of sixty, that he was a babe when he first received his diploma. He who is capable and loves to learn, learns fastest after he begins to teach others; if it was not so the schoolmaster would soon become a dogmatical pedagogue, a blind leader to the blind. It is far better to commit inadvertant blunders, which may be easily corrected even by ourselves, than to spend time hunting up obsolete authorities to confirm us and our readers that we are right, when a very little study of nature's simple lessons would convince us that we were wrong.

Methinks the day is at hand when farmers will begin to feel themselves a privileged class, not the mere blind drudges in nature's great laboratory; but intelligent co-workers with her, with that faith in her infallibility which lightens labor and gives success to every experiment. Tell a man how he misapplies his labor, wastes his manure or suffers it to deteriorate by the loss of that organic matter which is as volatile as it is indispensable to vegetable nutrition, and he may assent to the truth of your doctrine; but it will be evident that its importance has not either penetrated his mind or affected his will; but when he sees his neighbor reap the immediate benefit of a better system, his prejudice lets go its hold, and he becomes a zealous convert to a better practice. Last fall a man living at Buffalo sent here for a quantity of pipe and tile to drain a lot of 18 acres of intervale land on Buffalo creek, four miles from the Lake. When he was putting down these tile two farmers rode up to the fence; one said to the other, "What on earth are they doing with those pieces of earthen?" "I don't know," was the reply. "I suppose they are for some kind of steam works." The man who tilled that lot the year before, ridiculed the idea that it required draining; he said it was all sandy loam but the low clayey patch next the plank road, that the water never stood on any part of it the next day after a rain; that even the clay patch always got dry enough to plow by the middle of May. This spring he saw that field plowed early in April, clay and all; so incredulous was he that the clay was dry enough to plow,

that he examined the furrows with his hands; seeing is believing, but feeling to him was the naked truth. "Why," said he, his eyes starting to their sockets, "I never saw this land at any season in such fine order before; I have not yet been able to plow a furrow." 'Tis needless to say that this man of stubborn unbelief, who could not be converted perhaps by all the professors in Christendom, was now changed "in the twinkling of an eye," to that true faith which is henceforth to animate him, to give his bone and muscle only to a better practice. Ere long I take it the two farmers will not need the same miracle to teach them the difference between draining pipe and steam pipe.

S. W.

Waterloo, N. Y., May 1853.

CALENDAR OF OPERATIONS.

JUNE—JULY.

FRUIT.

GRAPES INN-DOORS.—*Mildew.*—This is an insidious enemy to the grape, and one that requires constant watching and vigilant action on the part of the cultivator; remedies for its eradication are, fortunately, simple, and easily applied. We believe, however, both from published opinions and conversations held with experienced grape growers on the subject, that there is diversity of opinion with regard to its cause. Currents of cold air, damp winds, too much moisture at the roots, an over-supply of atmospheric humidity, and the reverse, have all been attributed causes of its appearance. We take our stand upon the latter, and firmly believe that it proceeds from a deficiency of moisture in the air. Reasoning by analogy, we find that the gooseberry attains greatest perfection in cool, moist climates. In this country, where there is less moisture, it becomes mildewed. Late sown peas are generally rendered useless from the same disease, which is prevented by abundant waterings. Grapes that are forced in early spring, and consequently-ripe before the summer aridity occurs, are never mildewed. In the first volume of the "Florist," an instance is recorded where its increase was prevented by keeping the grapery well closed to exclude external air, the interior being kept damp by liberal sprinklings of water. Mildew is so associated with dampness and decay, that it appears unreasonable to suppose conditions extremely opposite can produce it. There is, however, a species of mildew "which is produced by a dry air acting upon a delicate surface of vegetable tissue," (Lindley); and it is *this* mildew, we think, that affects the grape.—The native kinds are seldom affected—their thick skins are proof against its attacks. Currents of cold air are a reputed cause; currents of hot, dry air we

consider nearer the truth. A moment's consideration would remind us that currents of cold air are "few, and far between," during the month of July. That auidity has to do with it might be surmised from the repeated observation of its appearance being first detected on the lower part of the house, if the front ventilators are opened; and a very frequent recommendation to keep that portion of the house closed, thus preventing a rapid evaporation of moisture. We have in many instances seen Black Hamburgh grapes fruiting in the open air; but with one exception, they were rendered useless by mildew. In the exception alluded to, the fruit was clean and perfectly ripe, though badly colored. The vines that produced them were trained on a circular-topped arbor, the waste water from a pump ran down the centre of the arbor, which was rarely dry; consequently there was a continual evaporation arising about the fruit. The situation was, perhaps, otherwise favorable, being shaded from afternoon sun. We are aware that these remarks do not coincide with the generally acknowledged origin of mildew; but our observations leads us to these conclusions. We will be glad to learn from the experience of others, if our opinions are erroneous.

Happily, however, there is an antidote. Sulphur is an established preventive and cure. It may be applied in various ways—sprinkled thickly on the ground, or thrown with an engine on the plants will arrest its progress. Unslacked lime and sulphur mixed in water, give a solution which has been used with success when syringed over the plants.

GRAPES OUT-DOORS.—Attention to tying up, pruning and thinning will now be required. There cannot be a more mistaken economy than over-cropping; a heavy crop never ripens well, the plant is weakened from over-exertion, and the wood produced will be weak and not properly matured, and several years must elapse before the plants recover sufficiently to bear an average crop. On weak, low shoots one bunch will be enough to leave; all others cut off. Higher up on the plant, where the growths are stronger, two may be left. On all except leading shoots, pinch out the tips six or eight leaves beyond the fruit, tying all regular and securely. The occasional application of soapsuds, or other liquid stimulant, will be favorable, especially during dry weather.

STRAWBERRIES—after the crop is gathered, if intended to fruit another year, should be kept clear of runners and weeds, and receive occasional stirrings between the rows, especially after heavy rains. If an opportunity can be embraced immediately before a shower, of giving them a soaking of manure water, the trouble will be well repaid. It is a practice with many to allow the young plants to establish themselves between the rows, and destroy the old ones in the fall. Where this is intended, the open space should receive a heavy coating of well decomposed manure, and cover in deep and thoroughly. When space is limited, and not convenient to occupy a separate

piece of ground with a new plantation, this system does very well for a few years—provided the soil is well enriched, and kept in good condition.

RASPBERRIES.—We have found it a good practice to thin out the young shoots about this time, leaving five or six of the best growths, and clearing away all the others. Those that are left will gain additional strength, and their development will be still further encouraged if the bearing wood is cut out as soon as the fruit is all gathered.

Surface Stirring.—No careful cultivator will permit weeds to overrun his fruit garden; but even although the soil be tolerably clear of weeds, the surface should be stirred from time to time to allow the admission of atmospheric air and moisture to the roots. We have frequently remarked that the physical texture of the soil for fruit trees is of much more importance than its chemical constitution. The soil for a fruit garden may be made too rich by the application of manures; and when this is the case the trees will grow luxuriously, but will not fruit. Nothing in the shape of manure can compensate for a deficiency in the porosity of the soil; a bulky, undecomposed mass of organic substances, such as barn-yard manure, applied to an adhesive, clayey soil, will have a tendency to impart a degree of friability. But in these times of concentrated *essences*, porosity must be secured by other means. Draining is the fundamental auxiliary in conjunction with deep cultivation. Guano, poudrette, and other artificial manures can then be advantageously applied in small quantities annually, towards the end of the season, burying it slightly to prevent in some measure the loss of gaseous matters. A soil managed in this way may be kept in fine condition during summer by a system of deep surface stirring, more particularly after heavy rains, which consolidate and harden the surface. The more air in the soil the less will it be effected by drouth.

These general remarks may meet the wishes of your correspondent who inquires about soil for seedling fruits. S. B.

FLOWER GARDEN.

I promised in my last to resume the subject of budding Roses, as there is perhaps no one subject of American floriculture less attended to. Any one acquainted with European gardening must very much miss the "standards," the miniature tree roses which there abound. To account for this we are told that the English dog rose, (*Rosa canina*,) on which they are worked, is not adapted to our climate, and that whatever are worked on them soon die out. This is undoubtedly true of imported trees, especially when planted in an exposed situation. The stem becomes "bark-bound," and frequently dies down below the bud, and suckers so abound that the energy of the stem is materially weakened, and frequently the whole dies off. But if a strong sucker is led up, and the rest taken off, and when it becomes of a proper

height and condition, budded with a kind adapted to it, it will succeed perfectly, never dying down, or being otherwise than healthy in sunshine or shade, if only common attention be paid to keeping off the suckers that will come up. This shows the necessity of raising our own stocks; and those who have specimens of the dog rose, (and few who have roses but can raise up one) I would recommend to let one or more go to seed for that purpose. They would be at least two years from the seed even under favorable circumstances, before they would be in a condition to work as standards; but a stock once obtained, can by sowing a few every year, be readily kept up.—There is *no other* kind fit for general use as a stock for standards, as the much-of-late vaunted *Manetti* stock suckers worse than the dog rose when trained up for a standard. Its recommendation is, that it is easily propagated, and *late in the fall* other roses take easily on it. In my experience I find rose buds take best about “peach-budding” time, or (in this district) the beginning of September. The *perpetual* kinds, or Remontants, deserve more extensive cultivation; their first crop of flowers should be cut off immediately they begin to fade, in order to produce a succession. Another thing *not to do*, is, to take up layered Carnations *as soon* as they are rooted, as frequently recommended—let them stay till late in the fall. Dahlias in beds often look very pretty when pegged down, covering entirely the surface of the ground. When growing in a warm or dry situation they produce finer flowers on this system, as the ground is kept moist and cool.

GREEN HOUSE.

The Pelargonium will, in most collections, be going out of flower. If they have been grown in the house they should have all the light and air possible, in order to ripen the wood well before cutting them down. A great deal depends on this, if large, well-grown specimens are desired, as the buds do not “break” well on ill-ripened wood. To prolong the flowering period of the Fuchsia, keep the house in which they are growing cool and moist; to do this, shade well, and syringe two or three times a day. The German Daisies, which are now coming into such deserved request, are better turned out of the frames in which they have been flowered into a frame with a north aspect, where they can be kept from the sun, cool and moist. They are, however, impatient of close confinement; now is the time to propagate them by offsets. Neapolitan and Tree Violets, indispensable winter flowers, should also be treated in the same way. Pansies, Cinerarias and Calceolarias, as they root, should be potted and placed in similar frames, and the seeds of selected kinds sown there as fast as they ripen. Chrysanthemums should never be allowed to get matted in their pots, but be constantly repotted into very rich soil, as they grow very dwarf; and handsome plants of the old large kinds may be obtained by layering down luxuriant shoots of plants growing in the open

borders, just before they show flower buds, into 4-inch pots. In a few weeks they will be rooted, when they may be taken off and treated as the others. To assist in keeping up the summer interest of the greenhouse, a good stock of Begonias should be obtained; few insects care to touch them, while some of them are always in flower, and others successively. They are of the easiest culture, and do better in than out. In American nurseries many kinds can be obtained, amongst the handsomest of which are *B. Evansiana*, *nitida*, *incarnata*, *manicata*, *Hydrocotylifolia*, *sanguinea*, *coccinea*, *odorata*, *parviflora*, *fuchsoïdes*, and *albo-coccinea*. *B. cinnabarina*, considered one of the handsomest, has been introduced; but I believe has not been yet let out by the nurserymen. It would greatly tend to encourage the growth of these useful summer house-blooming plants, were our horticultural societies to offer premiums for the best grown specimen at each of their monthly meetings.—All plants kept in the house will need constant syringings and attention to keep down the insects.

HOT AND ORCHIDÆ HOUSE.

Hothouse plants do not require a higher temperature than greenhouse plants at this period; but they must have a moister atmosphere to do first-rate in. Indeed, some kinds, as *Medinillas*, *Ixoras*, *Brunfelsias* and *Pleromas*, do but ill in a greenhouse atmosphere in summer. The syringe should therefore be applied very freely, as the air necessary to keep down the temperature dries the atmosphere very much. Orchidæ, are generally kept much too hot in summer, as well as too close. Air should be given from the top sashes whenever the temperature does not fall below 60°; in warm nights also they may be often left open. The glass should be kept shaded, as it is almost impossible to keep up the necessary moisture otherwise with so much air; some means should be taken to keep an evaporating surface near them, as well as to give them frequent syringings. Never allow the temperature to go above 80°—a high moist temperature will destroy an orchid sooner than anything I know. *Renanthera coccinea*, *Dendrobium aggregatum*, most of the *Cattleyas*, and hard-leaved *Epidendrums* do not flower well in the shade; they should be put as near the glass as possible.

VEGETABLE GARDEN.

About the end of June the main object of the gardener will be his Celery crop. There are many ways of planting; the best, in my estimation, being the single row system. The earth in the ditches cannot be dug too deep, nor the manure too abundant; that from the cow yard is to be preferred. *Rutabagas*, or Swede Turnips, should be sown about the same time; and where Turnips are desired early, a few may be sown in a cool situation. The great pest—the fly—has not yet been subdued by any one of the nostrums yet invented; a first-rate plan, where the crop is not very extensive, is to water

them early every morning in their earliest infancy, with a very coarse nose on the watering pot. This is effective in two ways—first, the water coming heavily on the soil carries the insect with it, burying many in the soil, while the plants are encouraged to grow rapidly beyond their power. Endive should be sown in a bed of light rich soil early in the month—it is beginning to be an indispensable winter salad. Attention will still be required to succession of crops in Peas, Beans, Corn, Radishes, Lettuces, &c. T. J.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this Society was held in the Chinese Saloon, on Tuesday evening, June 21st, 1853. General Patterson, President, in the chair. The display for June was a remarkably fine one and much commended by the visitors. A few only of the objects worthy of special attention will here be noticed. In Mr. Buist's collection were the *Medinilla magnifica*, a beautiful specimen of the Melastomaceae, bearing a handsome cluster of pink flowers, and *Tecoma jasminoides rosea*, both new and of recent introduction, and now for the first time shown. In Frederick Lennig's were *Clerodendron Bethunianum* and *Medinilla Seiboldii*, new and for the first time exhibited; also *Gardenia Stanleyana*, a fine large specimen with flowers and numerous buds, and a collection of *Gloxinias*. In John Bell's, West Philadelphia, were *Delphinium Hendersonii*, *Siphocampylos nitidus*, *Achimenes Baumannia*, *A. grandidissima*, *Escheriana grandiflora*, *Tillandsia* species from Cuba, and six *Gloxinias*, all new and seen for the first time before the Society. In Mr. Cope's were *Siphocampylos nitidus* and *Eranthemum semperflorens* new and of recent introduction; also fine *Fuchsias* and a dozen choice plants, with beautiful cut *Carnations*. Mr. Dundas' gardener brought a fine array of beautiful *Fuchsias* and *Gloxinias* of the finest sorts. W. W. Keen's, of W. P., had six select *Fuchsias* and a dozen of choice standard plants. H. Pratt McKean's gardener, of Torresdale, presented six of the finest *Fuchsias* shown. Robert Cornelius' gardener had a very fine grown specimen of *Campanula pyramidalis*. Thomas F. Croft sent a collection of cut seedling *Verbenas* of merit. Thos. Meehan, gardener to C. Cope, exhibited a basket of cut flowers, displaying in the centre a fully blown flower of the *Victoria regia*, the 113th from the same plant. Designs, baskets and bouquets were shown by Thomas Meghran, gardener to R. Cornelius, Thos. Meehan, Mr. Cope's gardener, John Bell, Robert Kilvington and from the garden of J. L. Goddard, W. Philadelphia, all in fine taste. The fruit table presented a tempting spectacle, containing Black Hamburg and White Frontignac Grapes; Peaches—varieties, Elisa, Druid Hill, Early York and Geo. 4th. Nectarines—Downton, Early Newing-

ton and Pitmaston varieties; and the Shanghai Peach, believed to be exhibited for the first time in America, from the conservatories of C. Cope. Three bunches of the White Sweet Water Grapes, from Eden Hall. A rich display on nine dishes of Cherries, from Mrs. J. B. Smith, consisting of the Royal hative, Bigarreau Cocaret, Burr's Seedling, Gobet, Belle Magnifique, Royal, Montmorency, Griotte and Mayduke. Isaac B. Baxter had the Gros hative, Guigne noir, Blackheart and Mayduke Cherries, a dish of the Col. Wilder Raspberry. Gooseberries 32 to the pound, White and Red Currants. J. F. Knorr, four kinds of Currants of the best sorts. J. M. Page, a dish of Moyamensing Strawberry. Wm. Hobson, the Early Richmond and Black Tartarian Cherries. Dr. Brinckle, Raspberries, viz: the Mrs. Ingersoll, Mrs. Wilder, Gen. Patterson, Longworth, Emily and No. 35 H. Dr. J. K. Mitchell, seedling Raspberries. R. Cornelius' gardener, Hovey's Seedling Strawberries.

The two large tables of Vegetables were furnished from the gardens of C. Cope and R. Cornelius; much credit is due to their gardeners for such fine esculents presented. James Ridings exhibited a very interesting case of pestiferous insects collected by him this season, which attracted attention; it contained Borers of the Maple tree, the Linden, the Apple and Quince, the Cherry and Locust, the Ash, the Locust, the Cherry and Ash, the Peach, the Currant and Gooseberry and the Squash.

Premiums awarded on the occasion were:

By the Committee on Plants and Flowers, viz: *Gloxinias*—For the best six to James Bisset, gardener to James Dundas; for the second best to John Bell, W. P. *Fuchsias*—For the best six to A. Burnett, gardener to H. Pratt McKean. *Plants in Pots*—For the best twelve to Thomas Fairley, foreman to R. Buist; for the second best to Wm. Grassie, gardener to W. W. Keen; for the third best to John Bell. *Plant in a Pot*—For the best grown specimen *Gardenia Stanleyana*, to John Pollock, gardener to F. Lennig. *Plants shown for the first time*—A premium of \$5 to Thomas Fairley, foreman to R. Buist, for fine plants in bloom of *Medinilla magnifica* and *Tecoma jasminoides rosea*; a premium of three dollars to John Bell for *Delphinium Hendersonii*, six very beautiful *Gloxinias* and two *Achimenes*; a premium of two dollars to John Pollock, gardener to F. Lennig, for *Clerodendron Bethinianum* and *Medinilla Sieboldii*; a premium of one dollar to Thos. Meehan, gardener to C. Cope, for *Eranthemum Semperflorens* and *Siphocampylus nitidus*.

Bouquet Designs—For the best to Thos. Meehan; for the second best to Thos. Meghran, gardener to R. Cornelius. *Basket of cut flowers*—For the best to the same; for the second best to Robert Kilvington; for the best of Indigenous flowers to Thos. Meehan; for the best hand bouquet to John Bell; and a special premium of one dollar to Thos. Meehan for a box of Carnation flowers. The Committee notice as deserving special attention, a

- very fine specimen in John Bell's collection of *Delphinium Beauty of Charronne*, a hardy herbaceous plant recommended as a very desirable bloomer of great duration.

By the Committee on Fruits. For the best Black Hamburg and White Muscat of Alexandria Grapes, to Thos. Meehan, gardener to C. Cope; for the best Cherries, Barr's Seedling, and for the second best Belle magnifique, to Francis Guoin, gardener to Mrs. J. B. Smith. The attention of the Committee was especially attracted by a small quantity of the fine Strawberry, the Moyamensing seedling, by J. M. Tague; nor can they omit to notice the superior collection of Peaches, Apricots and Nectarines, for which they award a special premium of three dollars to Thos. Meehan; and fine varieties of Currants, for which they award a premium of two dollars to J. F. Knorr. They also notice choice varieties of Seedling Raspberries, from the gardens of Dr. Brinekle and Dr. Mitchell.

By the Committee on Vegetables. For the best display of Vegetables by an amateur gardener, to Thos. Meehan, gardener to C. Cope; for the second best, to Thos. Meghran, gardener to R. Cornelius.

AD INTERIM REPORT.

The Fruit Committee, in presenting their usual ad interim Report, would remind the Society that, at the stated meeting of last month, specimens of two new Grapes (one a seedling of the Black Hamburg, the other the Musque Verdel,) were exhibited by the originator, Mr. J. Fisk Allen, of Salem, Mass. Wishing to have an opportunity of carefully examining these two varieties, the committee only noticed them cursorily in their regular report for that evening, with a promise of submitting a more detailed pomological description of them in their June ad interim report. The specimens having been winter forced, and being ripe in March, were kept too long after their maturity to be in their greatest perfection.

Allen's Seedling Black Hamburg.—The bunch exhibited was not very large, though it is probable there will be an improvement in this respect.—Berry large, black, oval; seed grey; flesh solid, and possessing much of the character of the Black Hamburg; quality "very good."

Musque Verdel.—This is a natural cross between the Grizzly Frontignan and the Verdelho, the Wine Grape of Madeira. Bunch large shouldered, loose; berry rather small, about half an inch in diameter, round, pale red; seed light cinnamon color; flavor rich, saccharine, highly perfumed; quality "best;" said to be as early as the Black July, and the Pitnaston.

Mr. Allen deserves the thanks of pomologists for having originated two varieties of Grapes of such excellence; and being of native origin, they may prove, for out-door culture, better suited to the requirements of our climate than their transatlantic parents.

From H. W. S. Cleveland, of Burlington, N.J.—Fine specimens of Strawberries without a name. Fruit large, roundish, sometimes ovate; dark red; seed of the same color, set in superficial depressions; calyx reflected; stamens persistent; flesh yellowish-white, saccharine, high flavored; quality "best;" the fruit and leaf clearly indicate the variety to be a Hautbois, probably the Lafayette. It is to be regretted that this luscious class of Strawberries is so little cultivated.

From Mr. Stuart.—Beautiful specimens of Strawberries, Hovey's Seedling, of last year's planting; some nearly four inches in circumference; quality "very good."

From Mr. Gerhard Schmitz, of Philad'a.—Fine specimens of two of his Seedling Strawberries:

1. *The Pennsylvania.*—This variety was a seedling of the Moyamensing, and was exhibited by Mr. Schmitz last season for the first time. Fruit large, broadly conical, dark crimson; seed crimson, and when shaded, yellow, set in depressions not very deep, with roundish intervals; flesh red; flavor fine; quality "best;" sexual character pistillate; leaf large, deep green, serratures crenate. The committee award a premium of five dollars to this variety, as the best new American Seedling Strawberry of superior quality, after two years' trial.

2. *Schmitz's No. 3.*—A seedling of the Washington, exhibited now for the first time. Fruit large, roundish ovate, sometimes inclining to conical; light crimson; seed crimson, often yellow, set in rather deep indentations, with intervals somewhat ridged; flesh pale red; flavor pleasant; quality "very good;" sexual character pistillate. Leaf large, light green.

From Caleb Cope, Esq.—Specimens of four varieties of Strawberries:

1. *McAvoy's Superior.*—This variety originated with Mr. McAvoy of Cincinnati, and was formerly known as his No. 12. In May 1851, it received a premium of one hundred dollars from the Cincinnati Hort. Society. Mr. Cope's specimens were of great size and beauty, some of them measuring *five and a half inches in circumference!* Fruit very large; roundish ovate, occasionally slightly necked; deep brilliant crimson; seed crimson, sometimes yellow, set in indentations not deep, except in the the largest specimens, when the intervals are also somewhat ridged; flesh red; flavor exquisitely fine; quality "best;" sexual character pistillate.

2. *McAvoy's No. 1.*—Large, roundish, deep scarlet; light crimson seed; indentations rather deep, intervals not ridged; flesh whitish, partly stained with red; flavor agreeable; quality "good," perhaps "very good;" sexual character pistillate. An abundant bearer.

3. *McAvoy's Extra Red.*—Large, roundish; scarlet; seed red, sometimes yellowish; indentations tolerably deep, intervals somewhat rounded; flesh

yellowish, slightly stained; sub-acid flavor; quality only "good;" pistillate; extraordinarily productive.

4. *Longworth's Prolific*.—This fine variety originated with Mr. Schneicke of Cincinnati, and was formerly known as Schneicke's Hermaphrodite. Very large; roundish ovate; brilliant crimson; seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red; flavor fine, quality "very good." A variety of great excellence; perfect in its sexual organization, and remarkably productive—a rare circumstance with staminate varieties of large size.

From Robert Buist.—Fine specimens of two varieties of Strawberries—McAvoy's Superior, and McAvoy's No. 1, described above.

From Henry A. Dreer.—A dish of the Moyamensing Strawberry. This fine variety originated with Mr Gerhard Schmitz of this city, and took the premium offered by the Pennsylvania Horticultural Society for the best seedling Strawberry exhibited in 1848. Fruit rather large; roundish conical; deep crimson; seed crimson, set in rather deep depressions, with rounded intervals, flesh red; flavor very fine; quality "best," pistillate; leaf large, with crenate serratures.

From Dr. E. W. Carpenter, Lancaster.—The Triumph of Cumberland Cherry, a native of Cumberland county, Pa. Specimens fine. Large, obtuse heart-shaped, sometimes roundish, compressed at the sides; deep crimson, almost purple when fully ripe; suture indistinct; stem rather long, slender, inserted in a broad, open cavity; apex slightly depressed; stone roundish-oval, compressed; flesh rather solid, red, slightly adherent to the stone; flavor fine; quality "best;" period of maturity about the middle of June.

The Treasurer submitted his semi-annual statement, which was read and referred.

Charles Kissler, of Reading, Pa., was elected a corresponding and honorary member, and four gentlemen contributing members.

Adjourned.

THOMAS P. JAMES, *Rec. Sec.*

MARYLAND HORTICULTURAL SOCIETY.

The Society held its monthly meeting in the Maryland Institute, on Thursday, the 12th inst. On this occasion Calceolarias formed the principal display; there being several collections of well grown plants, but the flowers of rather primitive cast, showing much room for improvement in this indispensable early summer flower. In the collection shown by Mr. Kemp, gardener to Miss Tiffany, were a few flowers of good properties. Mr. Frazier, gardener to John Hopkins, Esq., contributed a collection of healthy, well managed geraniums: The kinds being Capt. Darley, Van Tromp, Flower of

the Day, Commander-in-Chief, Princess Alice, Queen of Summer and Clifton Scarlet. In Mr. J. Feast's collection were noticed *Salvia Patens alba*, *Volkameria Japonica*, *Maurandia cœrulea*, *Clematis Sieboldii*, &c.—Dr. Edmondson communicated a few choice Fuchsias, cut flowers of *Azalea Indica*, from plants growing out of doors, sheltered during winter by a slight covering of boards; also fine fruit of his seedling Strawberry *Marylandica*, forwarded in pots. Mr. Feast sent Winter Bon Chretien Pears in good preservation. Mr. Kurtz contributed a large *Azalea Variegata* which was much and justly admired, together with cut flowers of *Rhododendron Vervainianum* and fine Ghent Azalea and Tulips. S. Feast & Son produced a fine table of Roses, Fuchsias, Pelargoniums, Geraniums, &c. W. Saunders, gardener to Thos. Winans, Esq., exhibited greenhouse plants, *Lescheautilia Formosa*, *Burchelia Capensis*, *Ericas Rubida*, and *Intermedia*, *Tropaeolum Tricolorum*, *Azalea Variegata*, *Centradenia Rosea*, *Begonia Sanguinea* and several Pelargoniums and Cinerarias.

Vegetables were well represented, there being various contributions of Cabbages, Lettuces, Radishes, Cauliflowers, Leeks, Asparagus, Carrots, String Beans, Salsify and Rhubarb.

The awards were as follows:

Pelargoniums—gardeners, premium, S. Feast & Sons,

ditto amateurs, W. Saunders, gr. to T. Winans, Esq.,
2nd Mr. Frazier.

Calceolarias—gardeners, S. Feast & Son,

amateur, 1st O. Kemp,
2nd J. Standemeyer, gr. to Mr. Brown.

Verbenas—gardeners, S. Feast & Son,

2nd J. Feast,

ditto amateurs, C. Campbell, gr. to Dr. Edmondson,
2nd Wm. Saunders.

Petunias—gardeners, S. Feast & Sons.

Fuchsias—gardeners, S. Feast & Sons,

2nd John Feast,

ditto amateurs C. Campbell.

Cacti—1st C. Campbell, 2nd Messrs. Pentland.

Roses—1st S. Feast & Sons, 2nd Messrs. Pentland.

Greenhouse Plants—gardeners, J. Feast,

ditto ditto amateurs 1st Wm. Saunders,
2nd C. Campbell.

Bouquets—1st S. Feast & Sons, 2nd Wm. Galloway, 3rd John Feast.

Design for Table—Loudon Feast.

Orchids—S. Feast & Sons. Azaleas—Mr. Kurtz.

Potatoes—C. Campbell,

Lettuce—1st Mr. Whittemore, 2nd Mr. Lushby.

Rhubarb—1st C. Campbell, 2nd John Feast.

Asparagus—1st Mr. Perine, 2nd J. Standemeyer.

Best display of Vegetables—Dr. R. Lushby, 2nd Mr. Whittemore.

Cauliflowers and Beans—J. Standemeyer.

The June exhibition was held on the 9th, when the following awards were made:

Best 12 Greenhouse Plants—(gardeners premium) John Feast. His plants were *Rhodostemma Gardeniodes*, *Torenia Asiatica*, *Columnnea Schiediana*, *Pimelia decussata*, *Stephanotis florabunda*, *Allamanda Nerifolia*, *Leschenaultia formosa*, *Ardiasias vispinosa* and *elegans*, *Vinca alba*, *Tecoma Jasminoides* and *Tremandra verticillata*. 2nd Samuel Feast & Sons, whose lot consisted of *Achimenes grandiflora*, *Gloxinias Victoria regina*, and *Fyfiana*, *Ixora Coccinea*, *Azalea Danielsiana*, *Plumbago Rosea*, *Euphorbia grandiflora*, *Burchelia Capensis*, Pelargoniums, *Madame Kosuth* and *Alboni*, Fuchsias *Sir J. Falstaff*, and *Geranium Flower of the Day*.

Best 12 Fuchsias—(amateur's premium) C. Campbell, gardener to Dr. Edmondson, the kinds being *Prince Arthur*, *Eliza Meilliez*, *Microphylla*, *Prince of Orange*, *Flora's Diadem*, *Speciosa*, *Sir John Falstaff*, *Voltigeur*, *Globosa alba*, *Madame Sontag*, *Fair Rosamund* and *Lord of the Isles*.—2nd, O. Kemp.

Best twelve Fuchsias—(gardeners) John Feast; 2nd, S. Feast & Sons.

Calceolarias—best display John Feast. Cacti—best Pentland & Bro.

Roses—Best 24 cut blooms; 1st S. Feast & Sons, 2nd Wm. Saunders, 3rd Pentland & Bro. Best 12 cut blooms; 1st Edward Kurtz, 2nd Pentland & Bro. Discretionary to Wm. Saunders, gardener to Mr. Winans, for display of Pelargoniums. Best bouquet S. Feast & Sons, 2nd J. Galloway. Table Design Pentland & Bro., 2nd J. Feast. Discretionary to H. Bosse, gardener to Mr. Mankin, for large bouquet.

Strawberries—Best distinct variety, 1 quart each, Dr. Edmondson, with *McAvoy's Superior*, *Hovey's Seedling*, and two of his own seedlings, viz:—*Haarlem Orange* and *Charles' Favorite*; 2nd S. Feast & Sons with the following: *Hovey's Seedling*, *Boston Pine*, *Black Prince* and *Keen's Seedling*. Best 1 quart of any variety, Dr. Edmondson, seedling *Marylandica*, 2nd O. Kemp, *Hovey's Seedling*, 3rd J. Feast, *Hovey's Seedling*. Best seedling, Dr. Edmondson, *Marylandica*.

Cherries—Best Wm. Saunders, *Black Tartarian*, 2nd Mr. Fuss; discretionary to Mrs. Law for *Black Heart*. The committee on Fruit report that Dr. Edmondson's seedling Strawberry, *Marylandica*, is a very superior fruit both in size and flavor.

Vegetables—Best Beets, (gardeners' premium) D. K. Lushby, 2nd E. Whittemore. Early Cabbage, 1st D. K. Lushby, 2nd E. Whittemore.—(Amateurs.) Best Cabbage and Potatoes, C. Campbell. Best display of Vegetables, E. Whittemore, 2nd D. K. Lushby.

W. SAUNDERS, *Cor. Secretary.*

NEW YORK HORTICULTURAL SOCIETY.

The New York Horticultural Society held its Semi-annual exhibition last week. The display seems from the reports in the daily papers to have been a good one. The Herald regrets that the company was not very numerous. They had some leaves and a flower of the *Victoria regia*, from Mr. Cope's plant.

The following premiums were awarded:

ROSES. *Class I.*—First premium awarded to J. S. Burgess, gardener to W. E. Burton, Esq., Glen Cove, L. I. Do., Mateo Donadi, Astoria.

Class II.—First premium—George Hamlin, gardener to W. C. Langley, Brooklyn. Second premium—J. Burgess.

Class III.—Second premium—J. Burgess.

The prizes for plants have been awarded as follows:

Hothouse Plants—First premium to Thomas Duncan, gardener to E. J. Woolsey, Astoria. Second premium to L. Menand, Albany.

Greenhouse Plants—First premium to L. Menand, Albany.

Orchids—First premium to L. Menand, Albany.

Carnations—First premium to Wm. Chorlton, gardener to J. C. Green, Staten Island.

Geraniums—First premium to A. Gordon, gardener to E. Hoyt, Astoria.

Pelargoniums—Best six varieties—George Hamlin, gardener to W. C. Langley, Brooklyn; second best do—W. Chorlton, gardener to J. C. Green, Staten Island, best three fancy varieties—Wm. Chorlton, do., do.; best three specimens of scarlet—Alexander Gordon, gardener to E. Hoyt, Astoria; second best do.—Wm. Vanderventers, Astoria.

Fuchsias—Best six specimens—John Humphrey, gardener to F. Howe, Brooklyn; second best do—Martin Collopy, gardener to J. H. Prentice, special premium—Geo. Hamlin, gardener to W. C. Langley, Brooklyn.

Cacti—Special premium—Luke Mullin, Seventy-eighth street, Bloomingdale.

Ericas—Best three specimens—L. Menand, Albany.

Fruits—The fruits consisted of strawberries, cherries and a few nectarines and lemons. The following kinds of strawberries were exhibited: Longworth's seedling, Seneck's staminata, Boston pine, Hovey's seedling, Iowa, Picton pine, a very large sort, white; Livingston seedling, Prince Albert, white; black pine, a dark deep red, &c.

The prizes for strawberries were awarded as follows:

First premium—J. Hardman, gardener to W. H. Paine and I. Buchanan, Astoria. Second premium—Isaac C. Winans and Thos. Duncan, gardener to E. J. Woolsey, Astoria.

The cherries exhibited consisted of the following kinds: Elton, Belle de Choisy, Black Tartarian, Mayduke, Knight's early black, River's early amber.

First premium—Joseph Cudlipp, Jr., corner of seventy-sixth street and Broadway.

Nectarines—Discretionary premium—to G. A. Maxiner, gardener to W. C. H. Waddell, Esq., New York.

There were likewise some lemons of a very large size exhibited by James Angus, gardener to W. W. Fox, West Farms.

VEGETABLES. *Potatoes*—First premium—James Angus. Second premium—J. Hardman.

Peas—First premium—James Angus, West Farms. Second premium—J. Hardman.

Beets—First premium—Jos. Cudlipp, Jr. Second premium—John Brill, N. J.

Cabbage—First premium—Jos. Cudlipp, Jr. Second premium—John Brill, N. J.

Lettuce—First premium—John Brill, N. J. Second premium—Joseph Cudlipp, Jr. Discretionary premium—Charles Winter, corner of Seventy-third street and Eleventh avenue.

Radishes—First premium—James Angus.

Best display of Vegetables—First premium—John Fick, Bloomingdale, Eighth avenue. Second premium—James Angus.

Cucumbers—First premium—A. Gordon, gardener to E. Hoyt, Astoria. Second premium—Wm. H. Mitchell, gardener to William Watson, West Farms.

Cauliflowers—First premium—Martin Collophy, gardener to J. H. Prentice. Second premium—A. Gordon, Astoria.

Rhubarb—First premium—A. Gordon. Second premium—John Brill, N. J.

Bouquets—One of the prettiest sights is the collection of bouquets, placed on a circular table in a central part of the hall. In front of this table, in an ornamental stand of painted wicker work, T. Dunlap, of 634 Broadway, exhibits one particularly beautiful. On the large stand behind, mentioned above, are grouped various handsome bouquets, some in fancy baskets, and others in porcelain vases. The most unique and original article among them is a pyramidal structure of flowers, exhibited by Mrs. J. W. Faulkner, Stamford, Conn.; the base and plat on which it stands formed of flowers of every imaginable hue, and the top, or rather the spire, of the pyramid, for such was the idea of the shape that it conveyed, consisted of a pretty variety of the common digitalis or foxglove.

Basket of Flowers—First premium—Walter Park, florist, Brooklyn. Second premium—John Cranston, Castle Point, Hoboken.

Hand Bouquets—First premium—James Hagerty, 878 Broadway. Second premium—Walter Park, Brooklyn.


Parlor Bouquets—Second premium—James Angus, West Farms.

SHADE TREES.—Mr. Downing, in one of the last numbers of the "Horticulturist," which appeared before his untimely death, made an onslaught upon the Ailanthus. From the earnestness of the article one would have thought that the writer had passed a week in Philadelphia. Mr. Hovey has lately appealed from the judgment of his deceased cotemporary, which appeal leads us to the belief that Boston is comparatively free from the nuisance. If Mr. Hovey was obliged, as the writer is, to walk *across* Philadelphia twice a day, and be continually subject to the detestable smell, which is a cross between sulphuretted hydrogen and what might be called a *green* smell, of their blossoms, he would regret that he had ever said a word in their defence. In some of our streets they occur at intervals of a square, so that you no sooner get away from the effluvium of one tree than you are met by that of another. If some charitable citizens could only form a committee of vigilance, and enact lynch law upon every Ailanthus in the city, they would deserve a monument *ære perennius*.

In Schleiden we lately met the sentence—"It is a common saying among the people, especially among the Germans, that the wood of the lime contains gold," Now here is a chance for somebody to find a 'placer' near home, and to confer upon us a benefit equal to that of destroying the Ailanthus:—Let a company be formed to cut down, dig up and burn all the European Lindens which at this season obstruct the side-walks with their festoons of worms. Whether the amount of gold found would necessitate the erection of another mint we are not certain, but we wish the experiment tried.

THE MOBILE HORTICULTURAL SOCIETY held its first exhibition last month. It seems from the report in the "Alabama Planter," to have been very satisfactory. Among those who obtained premiums we noticed the names of several of our friends there. The Develins, Geo. L. Brown, and others. In future we shall endeavor to obtain full reports of the exhibitions there.

We congratulate our subscribers upon the arrival of several of the plates procured in Europe. In the coming numbers of this year we will give figures of several novelties lately introduced to British and Continental gardens.—The execution of these plates, as will be seen, is far superior to anything that can be obtained here—at least at anything under a very extravagant price; and we hope that the additional expense we are at in getting these, will induce our friends to lend their aid in obtaining an increase in our subscription list.

 We are under obligations to Mr. H. A. Dreer for a basket of Moya-mensing Strawberries, which were most exquisite in flavor, and remarkably well colored.

ERRATUM.—On p. 143, for "*Comtes*" read *Comptes*.

Letters received from J. C. Helm, Esq.. L. Knorr, M. D., yours is received; the numbers shall be sent by the next Havre or Bremen steamer.

T. M. I suppose that Mr. Lenchars can give his authority for saying that the glazing without putty has been mentioned in English papers.

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BEGONIA XANTHINA.



... XANTHIA

THE FLORIST AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, July, 1853.

[No. 7.]

BEGONIA XANTHINA.

YELLOW-FLOWERED BEGONIA.

Begoniaceæ.—Moncecia-Polandria.

CHARAC. GENER.—Flores monoici. Masc. Perigonii tetraphylli foliolis subrotundis, 4 exterioribus majoribus. Stamina plurima; filamentis brevissimis liberis v. basi-connatis, antheris extrorsis bilocularibus, loculis linearibus discretis, connectivi continui obtusi margini adnatis longitudinaliter dehiscentibus. FEM. Perigonii tubo triptero cum ovario connato, limbi superi 4-9-partiti persistentis lobis pluriseriatim imbricatis. Ovarium inferum triloculare. Ovula in placentis e loculorum angulo centrali bilamellatis plurima anatropa. Styli 3 bifidi stigmatibus crassis flexuosis v. capitatis. Capsula membranaceo-trilata trilocularis loculicide trivalvis: Semina plurima minima striata. Embryo in axi albuminis carnosus orthotropus.

Herbæ in Asia et America tropica indigenæ, foliis alternis petiolatis integris v. palmatilobis basi sæpe cordatis inæquilateris integerrimis dentatis v. mucronato-serratis stipulis lateralibus membranaceis deciduis, cymis axillaribus pedunculatis. dichotomis floribus albis roseis v. rubicundis.

CHARACT. SPECIF.—B. acaulis, rhizomate brevi crasso subtus radicante, foliis amplis oblique cordato-ovatis brevi-acuminatis sinuatis denticulatis subtus discoloribus (rubris,) petiolis aggregatis crassis folium subæquantibus rubris stipulatis crinitis, setis patentibus inferioribus reflexis. scapo petiolis duplo longiore, floribus nutantibus corymbosis flavis, masculis tetrasepalis, sepalis 5 oblongo-cuneatis unico majore rotundato magis concavo, foeminis triplo minoribus hexasepalis, sepalis æqualibus ovali-rotundatis, fructus alis duabus brevibus unica horizontaliter elongata striata. Hook.

Begonia xanthina, Hook, Bot. Mag. t. 4683.

Although many different species of this valuable genus have been discovered up to this time, we have had only those with white or red flowers. *B. cinnabarina* with its orange red flowers was an approach to what we now figure—the *Begonia xanthina*. But even the yellow of this is shaded with the red which prevails in a greater or less degree in the flowers or leaves, and stalks of all the genus.

This species, which flowered in July, 1852, in the collection of Mr. Nuttall, at Rainhill, Lincolnshire, was received by him in 1850, from the Bootan Himalayas, having been sent thence by his nephew, Mr. Booth.

It may be some time before this beautiful plant is imported into this country ; but we know that our enterprising nurserymen and amateurs will obtain it as soon as it finds its way into the hands of the trade in Europe.

HISTORY AND CULTIVATION.

Few plants have a greater claim on the American plant grower than the *Begonia*. It has been too much the habit to sigh after, and bewail the want of "Chiswick Heaths," and other things which *do not* do well in America, to the manifest neglect of many beautiful things which *do*. It is time we had ceased to be the mere copyists of English horticulture. We have so rapidly advanced, that we should aim at an independence that can be achieved ; and, as in government so in gardening, take our place as one of the horticultural "nations of the earth." We have been a "colony of Chiswick and Edinboro," "Paris and Ghent" hitherto ; we have experienced on every occasion slights and neglects ; whatever we do is passed over in silence, and whatever we discover remains unnoticed or is scorned. These are some of our greivances. All our horticultural papers have taken up the subject in turn, and pressed our claims on English journalists ; but how have they been met ? A private letter on the success of one individual plant has been published in one magazine ; and two hybrid Peonys have been named in Belgium in honor of Americans. Perhaps once a year a short extract in the *Revue horticole* on *Forsythia viridissima* from the *Horticulturist* ; or, a notice in the *Gardener's Chronicle* of how to preserve Tomatoes from *Hovey's Magazine*. We must have done with whining and complaining about these things. Let us strike out new courses for ourselves. We may never hope to excel them in Heaths, Pansies, Calceolarias, or many other things, as a general rule, nor is it desirable we should. Let them boast of their excellence ; we will raise another standard.

The *BEGONIA* is peculiarly adapted to become such a plant as I have described. Requiring in England a moist and very artificial atmosphere, it does not make any very great progress in popular estimation. Here it thrives with very common care ; all doing in a

greenhouse 9 months in the year ; and many doing well in the open air, if in a somewhat shaded situation. They are for the most part natives of Brazil or Mexico.

To cultivate them successfully we must divide them into two classes :—the *tuberous* rooted, and the *shrubby*. Each of these will require separate treatment. The following kinds are amongst the best in cultivation, either here, or in English gardens, from whence they can be easily procured.

TUBEROUS ROOTED.

1. *B. discolor* or *Evansiana*, native of China, with pinkish white flowers, may be had in bloom from May to October.

2. *cinnabarina*, from Bolivia, deep pink or cinnabar, from June to October.

3. *Martiana*, from Brazil, deep pinky rose, from July to October.

4. *diptera*, Cape of Good Hope, whitish, June to August.

5. *Barkeri*, Mexico, dull white, February to December.

These require to be kept rather dry and cool in the winter season. No. 5. may be had in flower all the year, by having several pots, and keeping them dry at different periods. Early in spring the tubers may be potted in 6 in. pots, in a soil composed of well-decayed leaf mould, loam, and sand. They require little water till the leaves appear, when they will take an abundance. They may be forwarded in a little heat, but will do pretty well if allowed to come along with the season. They are easily propagated from their tubers, by cuttings, or by seeds.

SHRUBBY OR FIBROUS ROOTED.

1. *B. nitida*, native of Jamaica, with pinkish white flowers, and large, thick, shining leaves. May be had in bloom all the year, and made into handsome specimens.

2. *B. spathulata*, another West Indian, with a very erect habit of growth. The leaves are folded in like spoons, and the small white flowers appear at the ends of the young growth. It flowers from August to December, and is but an average kind.

3. *B. odorata*, a Brazilian kind allied to the last, but has a fine foliage, resembling *nitida*, the flowers came out like the last from August to December, are much larger and sweet scented.

4. *B. hirtella*, a Brazilian species, with a rather starved looking habit of growth, but an abundance of small, pinky white flowers, appearing from June to December.

5. *B. ulmifolia*, a South American, with elm like leaves, but of no great beauty of flower. Only desirable to form a collection.

6. *B. argyrostigma*, a Brazilian species, with curiously spotted leaves, which is its chief attraction. The flowers appear from June to December. It is a very strong grower—occupies much room.

7. *B. hydrocotylifolia*, a Brazilian pretty species. It is herbaceous, or has its leaves from a rhizoma creeping on the surface. Its pink flowers, borne on scapes about a foot high, appear from February to May.

8. *B. parvifolia*, a native of the Cape of Good Hope. It has very small leaves, grows about 2 feet high, and is always in flower. A white flowering and desirable kind.

9. *B. albo-coccinea*, a West Indian. Its oblique leaves are almost round, are very large and thick, and of a deep red beneath. The flowers appear from February to May; white on the inside, and scarlet on the back. The best of the rhizoma producing kinds.

10. *B. nomophya*, a Brazilian species, in the way of *B. manicata*, with small white flowers, continuing from July to November.

11. *B. castaneæfolia*. The specimens that I have seen growing are so like *B. ulmifolia*, that I have either not seen the true species or they are both the same.

12. *B. Fischeri*, a rather scarce Brazilian species, but one of the most desirable, approaching *B. incarnata*. In the spring months it is covered with its numerous pink or white flowers.

13. *B. incarnata*, a South American, that should be No. 1 in all collections. Its pink flowers may be had nearly all the year.

14. *B. coccinea*, another first rate Brazilian. A strong grower, covered with spikes of scarlet flowers from April to July.

15. *B. manicata*, from Brazil. A fine species when well grown, though the individual flowers are indifferent. The leaves are distinguished by a production resembling the claws of a mole on their under surface. Flowers in winter and spring.

16. *B. fuchsoides*, a well known species from New Grenada, with fuchsia like foliage, and scarlet flowers, appearing from June to September, a strong grower and fine kind.

The species of this division are readily propagated from cuttings of the half ripened wood, put in sand, and plunged in a slight bottom heat. They are liable to damp off if kept too close. Indeed if they are in a situation somewhat shaded they will do better without the usual accompaniment of a bell glass. They will grow well in a soil of sandy loam and leaf mould. They should never be grown in very large pots; or, in the language of gardeners, should be always under potted. When growing fast they take a good supply of moisture; love a moist atmosphere and frequent applications of the syringe, and may be placed in the full light. If a moist atmosphere cannot be maintained, they will do better in a shaded part of the green house. The chief thing to guard against, is their damping off; small, well drained pots are the securities. When they are not growing they will live and do better with very little water. They are easily raised from seed, sown on the surface of the soil in pans, and placed in a warm shaded place, with the only attention of never being allowed to get dry. Some fine varieties, I believe, have been lately raised by hybridizing in Europe. It opens a fine field.

I think the remark of the Calendar writer in the last No. worthy of repetition; that the Horticultural Society would do well to encourage the growth of the Begonia by a premium.

A PHILADELPHIA GARDENER.

THE AURICULA.

Dear Sir:

Allow me to draw the attention of your readers to that much neglected but truly desirable class of flowers the Auricula. There appears to be a general idea prevailing amongst many persons that considerable difficulty is experienced in cultivating this lovely gem in our climate. This notion is certainly erroneous, and the object

of the following remark is to show how this may be accomplished. The Auricula, (*Primula auricula*,) is one of the very numerous species of Primrose, and no mean species either. Linnaeus claims this genus for Pentandria monogynia, and it forms the type of the natural order Primulaceæ. Our present subject is indigenous to the alpine districts of the European continent, Syria, and occasionally is found in the same situations in Britain, though rare. Its name Auricula has been applied from the supposed resemblance of the form of the leaves, to the ear of an animal, and hence the vulgar cognomen "Bear's Ears," a name somewhat revolting to the taste of some of our delicate and sensitive belles, but quite in character with the quaint and uncouth, yet intelligent and enthusiastic class of individuals, with whom it originated. In a wild state, the colours are yellow, purple, and variegated, and I am inclined to think, in opposition to the acknowledgement of some botanist, that two or three which are considered as distinct species, are nothing more than varieties of this, if so we may include white also. Handsome as the different varieties of this flower appear naturally, the claim to beauty has been so much enhanced, by the perseverance and enthusiasm of the florist's fostering care, for the last three hundred years, that at length, it has assumed a perfect symmetry of outline and marking, which renders it truly a gem. Were it only for the peculiarly rich odor of the flowers, it deserves a place in every garden, but when we combine this with the evergreen and neat habit of the plant, and the exquisite beauty of the flower, it seems strange as the cultivation is so easy, that it is not more generally seen, even what is grown are mostly varieties of no pretension to perfection, but simply a step or two removed from the natural state.

The Auricula is divided by florists into four classes, viz, green edged, gray edged, white edged, and selfs, the edged classes being mostly esteemed as exhibition flowers, although the selfs are tolerated and encouraged. There are also, several double varieties, but these are not considered equally valuable, yet they are well worthy of attention.

The following criteria constitute what is considered to be the main points of excellence in a prize Auricula. The stem should be

strong, erect, and high enough to raise the truss of flowers above the foliage. The individual footstalk, sufficiently strong to support the flower, and of a proportional length to the number of pips, so that they may not crowd each other, and which should not be less than seven in number, that the truss may be close and compact, and form somewhat a half globe. The tube containing the anthers, the eye, and the exterior circle, ought to be well proportioned, which will be the case if the diameter of the tube be one part, the eye three, and the whole pip six or seven. If edged the margin should be about equal with the next inner circle. The edges ought to be smooth, having no serrature, so as to appear starry, and the limb or upper surface, flat and even. The nearer the outline approaches to a perfect circle the better, although the very best flowers do not quite come up to this point as yet. Whatever the colours, they should be clear, bold, and distinct, and divided in a perfect circle, or the dark markings form a circle next the eye, and extend out towards the outer rim on each lobe, so as to form so many half circles. In the selfs the colours ought to be uniform, bright, and solid, or shaded off towards the outer margin distinctly and clear.

Around the cultivation of nature's greatest beauties there is generally a halo of mystery thrown. When any thing of this kind becomes recognized as a general favorite, speculative ideas, and vague theories have each a portion of precedence, and as some of these peculiarities happen to succeed, they are lauded, made public, and the tyro catches up the most ridiculous notions. Our present subject has not entirely escaped from this general contagion, for if we refer to some old and long established growers of the Auricula, we find that one thinks that the rotted down roots of the Willow, is the only matrix in which it will approach perfection; others again suppose, that nothing is so suitable as rushes decomposed into mould, and a portion of the same material cut short in a fresh state, and strewed over the drainage; while some will not believe in any fertilizer, but blood, mixed up with maiden earth, and laid together for a season. Now all these materials are well enough in their place for other things besides the Auricula, but to say that they are absolutely necessary, and that nothing else will produce the same

quality, partakes of a superstitious and retrograde movement, and belongs to the old school. The fact is, all that is required, is a tolerably rich and cool base, for if too poor the plant will be weak and the flowers correspondingly so, and if too rich the trusses are apt to become monstrosities, having irregular shaped flowers, and too crowded to form a handsome bunch, with confused colours, and undefined markings. In these remarks, I would not wish to detract from the honor due to the old floral veterans, to whose zeal we owe a debt of gratitude, whose exertions have produced many of the very best flowers, and without which we should have been minds of many classes of the greatest beauty. Still we must move ahead we live in an age of progress, and if we cannot accomplish greater individual perfection, we can certainly attain to the same by more simple means. To grow the Auricula, plant in a tolerably rich soil, a suitable compost may be formed, by mixing two thirds fresh loam from a pasture, and one third cow dung, well rotted, and laid in a heap a few months before being used. Fresh dung injures the colours, and causes the plant to grow too rank and deficient in substance, when thin and papery flowers are the consequence.

The Auricula may be grown in pots, or planted out into frames, or the open ground. If it is desirable to have a show of this flower in the green-house or parlour window; about the middle of August, prepare a quantity of six inch pots, place in the bottom of each, about an inch of broken crocks, or what is better the same depth of lumps of charcoal, over this put a layer of moss or fibry turf, to prevent the soil from falling down amongst the drainage, next fill in a portion of the above mentioned compost, and place into the centre of each pot a good and strong single crown. Before planting examine the roots and cut away any decayed portions, spread them out carefully, and fill up to the rim with soil, press it a little tight about the crown, and give the pot a smart rap or two upon the potting bench, which will settle all and leave a little space for future watering, do not plant too deep, but let the collar of the plant be somewhat elevated, which will prevent damping off, after potting give a good watering, but do not repeat this afterwards

further, than to keep the plant in health, for the Auricula is impatient of too much moisture, and most particularly so while at rest in the winter. In order to avoid continued saturation, the pots should be placed in a position where the water can pass away freely, and likewise shaded from the sun's rays; if plunged in a bed of sand or porous ashes, so much the better, and if worms should get into the pots; give it a soaking when dry with lime water, using the clear liquid; here they may remain till the approach of severe weather, when the pots ought to be washed and the plants carefully looked over (all decayed leaves should be removed clean away,) when they may be taken into the greenhouse and placed near the glass, freely exposed to the air and light; water carefully and rather sparingly at first, afterwards gradually increase it, (but at no time unduly,) as they advance towards blooming; do not give much artificial heat, or the flowers will be rendered weak or abortive; a Camellia or Geranium house is quite hot enough, in which a temperature of 45 at night ought to be kept.

Where there is not the luxury of a greenhouse, the same object may be accomplished by a common garden frame, (in fact a much better display to my taste) and with much less trouble and expense considering the great number of plants that may grown. In this case, during the latter part of August, or early in September, place one or more frames, according to the number of plants, in a situation freely exposed to the sun, and upon a well drained bottom, dig up the base so that the water may pass freely through, and fill in with about eight inches of the before mentioned compost, divide the plants into single crowns, the same as recommended for pots, and plant about six inches apart; if dry weather give a good watering, and keep off the glass till frosty weather sets in, when the sashes may be put on, and air admitted freely through the day. In case of rain the lights may be tilted up at the back, which will keep the plants dry and prevent any danger from rot. Open early in the morning, and keep all at rest till towards the middle of January, when the lights may be closed somewhat earlier in the evening, and the sun's heat allowed more freely; cover with straw

mats or other material, to keep out the frost, and line round the sides with rough litter or clean straw for the same purpose. When the flower trusses commence to push, water may be more freely given, but not overhead, unless in case of a genial showers, which seldom occurs at this time, and after the pips begin to expand, do not let even the rain in upon them, as much of the fine powdery substance, which constitutes a great portion of their beauty, would be thereby washed off, but apply water more freely between the rows, admit air sufficient, but avoid beating winds. By following these directions, and having a good stock of plants, the lover of flowers may be rewarded through the months of March and April, without the aid of a greenhouse, with one of the loveliest sights, and most enchanting scents in Flora's kingdom. So far we have spoken of the little favorite as a nursling and treasured up pet, but like many other of God's blessings, it is not so very mindful of man's fostering care. There are many of our city yards in which there is a shaded and sheltered spot, in all such there is ample accommodation for this plant; use a fertile and well drained soil, screened from the burning orb of summer, and the thawing gleams of winter, and we can be recompensed by a sight of its beauty, and refreshed by its delicious odor, without any other protection, although of course if protected and taken care of under glass, we have greater perfection, and shall be no losers for our extra trouble.

After blooming is fairly over, choose a piece of ground sheltered from the midday sun, if moist but yet drained, so much the better, plant out in rows a foot apart, and six inches in the row, place a little deeper than before, which will cause them to push out side roots. If dry give a good watering when planted and an occasional repetition, in case of drought through the summer; no further care is required, unless Red Spider, or Aphides should attack, when a good syringing with soap-suds, will speedily eridicate them.

The following list, containing twelve of the best in each class, is from the authority of Mr. John Slater, one of the "Lancashire Heroes," and a sure guide, a man whose enthusiam knows no bounds, and whose honesty is equal to his perseverance.

GREEN EDGED.

Litton's Imperator, Leed's Colonel Taylor, Booth's Freedom, Pollitt's Highland Laddie, Ashton's Prince of Wales, Pollitt's Standard of England, Yates' Morris Green Hero, Oliver's Lovely Ann, Barlow's King, Howard's Nelson, Moore's Jubilee, Page's Champion.

GREY EDGED.

Cheetham's Lancashire Hero, Syke's Complete, Kenyon's Ring-leader, Grimes' Privateer, Fletcher's Ne Plus Ultra, Fletcher's Mary Ann, Waterhouse's Conqueror of Europe, Rider's Waterloo, Kent's Queen Victoria, Taylor's Plough Boy, Beeston's Fair Flora, Ashworth's Newton Hero.

WHITE EDGED.

Taylor's Favorite, Lee's Venus, Ashworth's Regular, Taylor's Incomparable, Taylor's Glory, Wood's Delight, Catharina, Popplewell's Conqueror, Kenyon's Lord Chancellor, Hepworth's True Briton, Cheetham's Countess of Wilton, Pott's Regulator.

SELFS.

Netherwood's Othello, Kay's Jupiter, Blegg's Blue Bonnet, Berry's Lord Primate, Berry's Lord Lee, Grimes' Flora's Flag, Redmayne's Metropolitan, Schole's Ned Lud, Whittaker's True Blue, Bradshaw's Tidy, Barker's Nonsuch, Gorton's Stadtholder.

Yours Most Respectfully,

WILLIAM CHORLTON,

New Brighton, Staten Island.

June 27, 1853.

GARDENS OF PAEONIA MOUTAN IN CHINA.

BY R. FORTUNE.

These gardens are situated near the village of Fa-who, about 5 or 6 miles west from Shangae, in the midst of a vast country of cotton plantations. On the way I met a large number of *coolies* each carry two baskets of Moutan-paeonies in full flower; they went

to sell them in market. Arrived at the gardens I found there a number of these plants in flower and of a remarkable beauty. The purple and lilac species especially attracted the sight : among others a very pretty kind apparently distinct, with finely cut leaves and flowers of a velvety purple, like the Tuscan rose of our gardens. The Chinese call it Moutan Peony (black) and I believe it to be the same as that called *atro-sanguinea* by Dr. Lindley, in the journal of the Horticultural Society of London. Another species called "tse" or purple, had double flowers of a remarkable size ; it is probably this variety which they say has a thousand petals, and did not exist but in the garden of the emperor. The third kind is called "lan" (blue ;) it is a lilac variety ; its flowers are of the color of *Wistaria Sinensis*. There are besides other kinds of purple differently shaded, very distinct from the preceding and equally beautiful.

The double whites are also numerous and very remarkable. The largest among them has been called *P. globosa* by Dr. Lindley, but there are 4 or 5 others which approach very near to this. Some have a light shade of lilac, which gives tone to their color. The best is that called "wang" (yellow) by the Chinese ; this variety, of a straw color, is very beautiful, but notwithstanding inferior to some others.

The red peonies (Hong) are equally numerous. What is strange, is, that the kinds common at Canton and in England, are very rare here. These gardens contain about a half-dozen of new varieties of red peonies ; among others, that called "Van-yang-hong" by the Chinese, is the most beautiful plant which I have ever seen. Its flowers are of a bright and pure red, entirely different from all the others perfectly double ; each of them is about ten inches in diameter. In all I counted nearly thirty distinct varieties in these gardens.

The greater part of these beautiful varieties of *Paeonia Moutan* are unknown at Canton. This may seem strange in a country where flowers are so generally sought for ; but the Chinese are in everything such conservatives that a slight acquaintance with their customs will suffice to explain this apparent anomaly. The gardens of

Canton derive their supplies of *P. Moutan* from a district situated more in the west than Shanghae. From time immemorial the same gardens have furnished these flowers; they arrive always by the same road, and at the same time of the year. It seems that Shanghae until the end of the last war, has never been in communication with Canton, at least in what concerns flowers, consequently these beautiful varieties of Peony could not obtain a route towards the south and thence to Europe.

The establishments where they cultivate exclusively the *Paeonia Moutan* are numerous, but very small. They have the appearance of our cottage gardens, and are cared for in the same way, that is, by all the members of the family: the women take as much part in it as the men: they are very avaricious and love money extremely. When they have been consulted, I always had to pay dearer for the acquisitions of plants which I made. The soil of these gardens is rich and well-manured; this latter circumstance renders it less compact than the soil where they cultivate cotton.

The propagation and management of the *Paeonia Moutan* seems to have been perfectly understood by the Chinese at Shanghae, much better than with us. Our horticulturists complain without ceasing of the difficulty of multiplying this beautiful plant, and this makes the price remain high. Here is the method which the Chinese pursue, and which our growers may try.

At the commencement of October, they collect in the sheds and out-houses a great quantity of the roots of a certain herbaceous Peony, roots which must serve for subjects of *Paeonia Moutan*. The bundle of tubercles which forms the root of a herbaceous peony is divided, and each little root, in shape of a finger, becomes a subject upon which they graft the *P. Moutan*. Having placed a great number of these tubercles upon the potting table, they bring the grafts of the plants which they wish to multiply. Each graft is but an inch and a half to two inches long; it is the extremity of a shoot made during the summer just finished. The under part of it is cut into a wedge and inserted on the top of the finger shaped tubercle of which we spoke. The graft is covered by a ligature or by clay and the operation is complete. A great number of grafts

being thus made, they are carried to the garden and planted in rows distant about a foot and a half; the same space is left between plants in the same row. In planting, the head of the graft only remains above the soil; the part where the graft unites with the tubercle is always buried. Kaempfer says that the Chinese multiply the Moutan Peony by bud-grafting; this is an error, this process is never practiced by them, they do not even understand it. The author has been led into the error by the smallness of the bud which they use, this having but one eye at its end.

Each autumn sees thousands of plants grafted in this way. The little empty space which may be seen in the rows proves the goodness of the method; in fact a graft rarely fails to grow. At the end of about fifteen days the union of the root and the graft is complete: in the following spring the plants are beautiful and vigorous. They generally flower the first spring or at the latest in the second; it is then that they are taken up and carried to be sold in the market in the way I have described. The plant which has but one stalk and one flower has more value in the eyes of the cultivator at Shanghae than a stronger one; it is sold more easily, produces a very large flower, and presents no difficulty neither for lifting nor for transportation. Thanks to this circumstance I could always procure strong plants more advantageously than small ones.

In the gardens of the mandarins can often be met Peonies of a considerable size, Near Shanghae there is one which annually produces 3 to 400 flowers. The proprietor takes as much care of it as could the most enthusiastic amateur of his tulips. During its flowering, it was protected from the burning rays of the sun by a tent of canvass; in front was a seat where the visitor enjoyed in full the sight of these magnificent flowers. Every day, for several hours, the old man installed himself there, and while pipes and bowls of tea succeeded each other he looked lovingly upon his favorite "Moutan wha." It was certainly a noble plant, well worthy of the admiration of the old amateur, to whom I wish the pleasure of sitting a long time yet under his tent, to enjoy so beautiful a sight.

Translated from the Flore des Serres,

CHINESE PRIMROSE.

Winter flowering plants are not too plentiful, at least such as will bloom in the cool temperature of a greenhouse; we have many fine winter flowering exotics, but they either require a hothouse temperature to bloom freely, or are more difficult to manage during summer; we are indebted to the Celestials for many of our most valuable winter flowers, Azaleas, Camellias and among others that beautiful little gem the Chinese primrose. They are all of hardy and robust habit, and are thus within the reach of all, so far as cultivation is concerned, a recommendation of much importance to those amateurs who cannot devote much time to their collection. It has often occurred to me when visiting amateurs' greenhouses, that they would derive much more pleasure from their labors were they more select in the choice of their plants, choosing those only of known hardy and free blooming qualities, instead of aiming at a varied assortment, often expensive, and rarely satisfactory. I was more deeply impressed with this fact during a visit to an enthusiastic amateur last winter. On entering his greenhouse I was struck with the gay and cheerful appearance it presented, and it was only when about leaving that I observed the only plants in flower were a few Camellias, two or three Cinnerarias, and a quantity of Primulas of various colors, but these were so well arranged and set off with a profusion of healthy foliage, and the Primroses showing such fine rounded trusses, that I am confident not one person in ten would have noticed this simplicity of its production.

Although this plant is very hardy, I am aware that many amateurs are not so successful with it as they would wish. This, I presume, arises principally from its liability to decay if kept too damp at root, either from using pots of a large size, or supplying water too freely. Four and six inch pots will be found of ample size, not that a plant will not grow in a pot three feet in diameter as well as it would in one inches. The only difference would be that, in the former, the plant would probably require water once a month and the latter daily.

to keep up a succession of flowers for four or five months, seed should be put in at intervals of five or six weeks, from June to September, soil of a sandy nature should be prepared, and the seeds very slightly covered. The front shelf in the greenhouse will be a suitable place for them while growing, they should be encouraged by transplanting into a shallow box as soon as the first true leaf makes its appearance. If thinly planted (not closer than three inches) they can remain until sufficiently strong to be placed at once into flowering pots. These must be well drained by placing a handful of broken material in each pot. If attention is paid to this, there will be little fear of damp, if ordinary care is given in watering. Two small stakes should be inserted one each side of the plant, crossing other at top, no tying will be necessary, this will prevent them from toppling over and breaking off at the neck where they are very weak. A few of the latest sowing should be set apart for seedling. A little care and attention should be given to their selection, choosing those with large, well colored fringed flowers. Sometimes they incline to be semi-double; these should have the preference. About the middle of May they should be set out in the sun, watered regularly, and if they receive an occasional application of manure water the value of the seed will be enhanced. Under these conditions an abundance of seed will be secured. It is not worth trouble to preserve old plants; young ones flowering with much more vigour; any particularly fine variety, however, may be turned out of the pot after it has done blooming, some of the old soil removed and replaced in fresh compost. The double varieties are much superior to the single ones. They are increased by dividing the plant into cuttings. To propagate them requires a cool dry situation, partially shaded, paying great attention in watering, they must be kept rather dry until they begin to show symptoms of growth; otherwise they are certain to decay. It is probably on this account that they are not so extensively cultivated as they deserve to be. DELTA.

ON THE DOUBLE CHINESE PRIMROSE.

To the Editor of the Florist, Sir: As you invite communications from practical gardeners, I offer a few remarks on the above; as I think it a much rarer plant than it ought to be—few plants excel it in simple beauty, and by proper management it may be had in bloom every month in the year. Being double, it can only be propagated by cuttings, which may be taken off at any time, and readily struck in sand under a bell glass. In about three weeks they are sufficiently rooted to pot into single pots: I find them to thrive best in a compost of rotigh leaf mould and sandy loam, in well drained pots. I repot them as often as they become well rooted; and pinch off every flower stalk that appears till the plant is six months old at least. I then let it flower on, and as each flower truss shows symptoms of withering, pluck it out. By this course it will continue to flower a whole year. They frequently die out from exhaustion at this time, and the only way I find to prevent this, is to divide the plant into off-sets, and so start with them as with new plants. They always do well with me by this treatment. The double white is the commonest and most easy to be procured; but I have observed in a report of the Pennsylvania Society, that the purple exists also in your neighborhood.

If you think the above worthy of insertion in the Florist, I should be happy to send you some others when I have leisure.

Yours, &c., HORTUS.

NOTES ON ROSE CULTURE,

BY A LOVER OF ROSES. (Continued.)

HYBRID PERPETUAL OR REMONTANT ROSES.—This division of the Rose was introduced to us about 15 or 16 years ago and according to the opinions of good judges it originated between the perpetual Rose Du Roi and the Bourbon Rose; they have been till very recently nearly all of a crimson or dark red color. Florists and Rose-growers generally esteem these the finest of all Roses, to which I would coincide, provided, they were constant monthly

bloomers, which they are not, giving only two or perhaps faintly a third bloom with a meagre flower in the autumnal months. They richly deserve special attention for their fine bold flowers, rich foliage, and luxuriant shoots when on their own roots; or if budded they make very admired standard Rose trees. But oh! what nicety of eye, how critical the judgment to detect the difference of one half of them. For my own pleasure and gratification I would not give a groschen for 4ths of them; but we are so led off our guard by "have you got so and so," we blush to own up, and buy nearly all, good, bad, and indifferent; but pray who would grow Doctor Marx, Dr. Margolin, Madam Laffay, and nearly 50 others; all red, rosy red, dark red, light crimson, and such transpositions, meaning nearly the same in color and character? So be it. I will not detail before your thousands of readers such equivocal terms, but give off hand and full in my eye, a score that will please the most fastidious.

Auguste Mie, clear waxy rose, cupped petals.

Baronne Hallez, dark purple crimson, fine form.

Baronne Prevost, rose color, very large.

Caroline de Sansal, large, rosy blush, pink centre, of remarkably strong growth.

Duchesse de Montpensier, pale satiny rose, very fragrant.

Giant of the Battle, nearly bright scarlet. Is this not the rose of the group? Every one of your readers that wishes a rose bush that is perfectly hardy, bright in color, and constant in bloom may choose this subject.

Julie de Krudner, a new rose, nearly white, very double, and agreeably fragrant.

La Reine. I hesitate about this though a most superb flower; it has a paucity of bloom not altogether to my fancy; the color too is undecided being a rosy lilac, but extremely large and luxuriant in growth.

Lion des Combats, reddish crimson, shaded with scarlet, large, full, and fragrant.

Louise Le Clerc, delicate blush, perfect form, very profuse and fragrant.

Madam Laffay, purplish lilac, inclining to crimson, very full regular flower, plant of strong growth.

Madam Rives, quite a new variety, of a pale flesh or silvery blush color, of great substance, very distinct and perfectly formed.

Marquis Boccella, pale blush, dwarf habit, a constant bloomer, very distinct.

Pius 9th, crimson purple, very large, full and perfect, a profuse bloomer of strong growth.

Patenotte, pale rose, very exquisite form, fragrant and profuse, quite a new variety.

Queen Victoria, (Paul's) blush white, shaded with pink or peach blossom color, large, very full, and distinct from any other variety, quite new, very desirable.

Robin Hood, bright carmine, beautifully globular, and a rampant grower.

William Griffith, satiny rose, distinct color, a large bold petaled flower; quite new, and will rank amongst the best.

William Jesse, a favorite variety of a rosy crimson color, edged with lilac, very large, full, and constant.

Yolande d'Arragon, pale rose, producing its flowers in clusters the whole season, a strong grower. Sydonie, a newer variety is very like this, and I am doubtful if it is any improvement upon it, unless to a very critical observer.

I have not seen a clear good white as yet in this group. Florists and catalogues tell us of Blanche Vibert—white it is, but a sickly looking flower and plant, at the best. Blanche Portemer has nothing more attractive about it. A good white such as the old Madam Hardy is much wanted, it would be a treasure. There are over 100 of these Hybrid Perpetual varieties cultivated, one half of them are nearly fac similies of each other. They all require more stimulation in their culture than any other roses; if a strong luxuriant growth is not produced a very meagre show will follow; dark rich green foliage and strong shoots will produce a corresponding bloom—but yellow foliage and weak growth produces similar sickly blooms, deficient in color, size, and fragrance. Also, observe that taking off one half of the buds in May and June, is beneficial to a

continuance of bloom during the season; in dry weather they should be liberally supplied with rich water or soap suds, or if the ground has been abundantly manured, water of any description will suit; observing that one copious supply once a week is better than a small portion every day.

NOISETTE ROSES are those clustering sorts that bloom from early in the season till destroyed by frost; their flowers are generally small, though there are now some of them nearly as large as any others, but the size takes from their profusion. The growth of the family is of all grades, from 1 foot to 20 feet in a season; unfortunately for us, however, the finer kinds are rather tender, being nearly or entirely killed in our severe winters. Those tender kinds of greatest splendor are Lamarque, Cloth of Gold, Solfatare, La Victorieuse. These are hybridised with the Tea Rose, making them more tender; but for milder climates than Philadelphia the splendor of them equals any description. A friend writes me from Texas, that Cloth of Gold reaches the 3d story, and is in bloom 9 months of the year, and its odor equal to the magnolia. In pruning Noisette Roses, thin out the old wood, and shorten the wood of the previous season. The young wood should always be allowed to have its full growth, as it is most frequently terminated with a cluster of flowers; the sorts without encroaching upon their beauties might be curtailed to one full dozen, which would comprise as follows:

Aimie Vibert, pure white, very compact, a dwarf grower.

Cloth of Gold, a very luxuriant grower, requiring dry rich soil; flowers quite large, frequently 5 inches in diameter, opening a bright lemon yellow, and fading to a pale straw color; should be protected by covering in winter.

Desprez or Jaune Desprez, flowers buff color shaded with pink, in profuse clusters, very fragrant, plant vigorous.

Fellenberg, color pink, red, or crimson as the season may be; a constant bloomer—does very well for a piazza or pillar, quite hardy.

Lafayette, this old fine pink rose must not be neglected; there

are few or none to equal it in color and profusion; a moderate grower, flowers prettily cupped and quite profuse.

Odorata, pure white, very sweet, an abundant bloomer and perfectly hardy; stood the winter of '51, without any protection; of moderate growth.

Ophirie, color orange, orange and pink, pale yellow or bright yellow, all according to the weather and season; blooms abundantly, especially in the autumnal months, flowers very double, plant hardy and growing freely; quite distinct, foliage of a pleasing lively green,

Philippart, dark pink, must be well established before its character is fully ascertained; blooms in large clusters; exceedingly hardy and of strong growth.

Pourpre de Tyre, not easily to decide whether this variety is a Bourbon or Noisette; but florists place it where I now do. The flowers of medium size, dark red or crimson color; plant of moderate growth.

Triomphe de la Duchere, one of the very best Noisette roses, flowers abundant, large, full, of a rosy pink color and fragrant; plant strong, but not rampant.

Vittelina, pure white, fine form, buds shaded with pink, very double, medium size, growth moderate, very desirable.

Lamarque, flowers very large, white with a sulphur yellow centre, plant of strong growth, requires a dry sheltered situation with a rich soil, and to be protected during the severe weather about Philadelphia.

I have omitted many others nearly equal to the above, such as Solfatare, Du Luxemburg, Phaloe, Boulogne, *Augusta*, &c. Of the latter I may say that I have not yet conversed with a judge or no judge of roses, in this vicinity, who pronounces it equal or nearly equal to the published description of it. I paid a V. for my plant, and consider it fully paid. If I was now to make out a list to send to my Florist, I would say Cloth of Gold, Ophirie, *Augusta*, &c.

[To be continued.]

 THE STRAWBERRY CONTROVERSY.

The communication of Mr. Meehan to the Pennsylvania Horticultural Society, seems to have excited the opposition of all those persons, and we believe they are the majority, who have settled the question to their own satisfaction, that the Strawberry is either pistillate or staminate, and unchangeably so. Mr. Meehan has produced his plants (of Hovey's Seedling), with staminate flowers. The Strawberry cultivators pronounce them (in the teeth of Mr. M's assertion that they are runners from pistillate plants,) to be not Hovey's, but another variety. Some others talk of the absurdity of plants being fruitful without fertilization, which, whether absurd or not, Mr. M. does not claim for his plants; we have seen nothing yet on that side in the way of argument, it is all assertion;—The Cinn. Hort. Society, formally pronounced it impossible, and with them there is no appeal from their "ipse dixit."

In the last number of the Farm. Journal, we have a letter, which we suppose is from the eminent botanist of that region, which we copy, as suggesting many reasons why Mr. Meehan may be right.

The statement of MR. MEEHAN, in the April number of the Farm Journal, alleging that he has observed the sexual characters of the Strawberry flowers to be variously modified by culture, or different methods of treatment—has elicited some strong asseverations of *opinion*, in contradiction to that allegation of *fact*. One writer unhesitatingly declares the alleged change to be "*utterly impossible*:" and I understand that in the Queen City of the West, they have had a *public gathering*, to deliberate on the subject, which resulted in a *Pronunciamento* adverse to MR. MEEHAN's statement,—his facts and observations being *rejected* by a clear majority of the voters present! The matter being thus *settled*, by preamble and resolution after the manner of political difficulties at a war-meeting, it may seem to be out of order, now, to offer any remarks on the controverted topic. Nevertheless, as this is reputed to be a Free Country, I should like to be indulged with the privilege of submitting a few suggestions,—if not in arrest of judgement, at least as a plea in mitigation of the sentence, against my friend MEEHAN. It is the remark of a vigorous and sagacious modern writer, that "no scientific question was ever yet settled dogmatically, nor ever will;" and I think the same may be especially predicated of questions of fact, in Natural His-

tory. I may here observe, that I was favored with the opportunity of examining one of MR. MEEHAN'S specimens,—in which there were certainly two scapes from the same root—one bearing a cyme of *pistillate* flowers (with minute rudiments of abortive stamens,) and the other a cyme of *perfect*, or hermaphrodite flowers: and whether the specimen was the progeny of a pistillate, a staminate, or a hermaphrodite plant, I should think the inference plausible, that the flowers on at least *one* of these two cymes, must have been a modification, or altered product; of the parent plant. It is this kind of change, in the character of the flowers, which I understand MR. MEEHAN to announce, as having occurred in plants under his management. Now, in view of the countless modifications daily observable in the organs of plants—and especially in the *floral organs*—I can perceive no sufficient ground for declaring the changes, reported by MR. MEEHAN, to be “*utterly impossible*.” The modifications here referred to, are a very different thing from the alleged *transmutation of one kind to another*,—which is vulgarly supposed to take place in certain plants, just as the Alchemists formerly pretended was affected among the metals. They merely alter the texture, distort the forms, or affect the developements of organs; but do neither change nor annihilate those *essential characteristics*, by which the plant is rendered permanently distinct from every other genus and species. The floral organs of many plants are remarkably subject to modification, under the long-continued influences of soil, climate, and culture, or management. Some flowers are rendered *double*, as it is termed, by the expansion of stamens into petals; others become imperfect, and even neutral, by the abortion or blighting of the stamens, or pistils, or both. The *Strawberry* appears to be very liable to this kind of blight; and hence the much talked of sorts, among cultivators, of *pistillates*, and *staminates*,—though in all the pistillate flowers, which I have examined, there were *vestiges* more or less obvious, of abortive *stamens*, on the rim of the calyx. It also varies much, under culture, in some other features,—especially in the development and character or quality of the *receptacle*, or what is commonly regarded as *fruit*: but no one, I believe, has yet seen a Strawberry plant transmuted into a *Cinquefoil*, though so nearly allied in habit. The organs of plants may be greatly disguised by the influences above mentioned; but still the essential distinguishing traits are preserved,—and there seems to be no insuperable obstacle to prevent a plant, with modified or abortive organs, from reverting, under a change of circumstances, to its original condition, and resuming its pristine form and character. The normal, or what may be called the *constitutional* character of the Strawberry-flower, is to be *perfect*—i. e. furnished with both stamens and pistils (possibly such may be the

true normal structure of *all* flowers); and although many other plants, as the Strawberry, are found with *imperfect*, and even *neutral* flowers,—every Naturalist and careful observer knows, that there is often an obvious effort and tendency, in such flowers, to a more complete development: *i. e.* to become *perfect* and *regular*. We occasionally see *diandrous* flowers become *didynamous*,—and *didynamous* plants developing *regular petandrous* flowers; and it is not at all unusual to find the *staminate tassel* of the cultivated Maize (*Zea Mays*, *L.* a *monoicous* plant,) bearing *fertile flowers*, and exhibiting a very successful attempt at the production of an *Ear*—or *cluster of Ears*—of *Indian corn*. These instances, I trust (for it is needless to multiply them,) may suffice to show that there is nothing irrational, nor incredible, in MR. MEEHAN'S observations; and that it is rather strong phraseology, to declare such phenomena to be "*utterly impossible*." The polemic writers on this Strawberry question, speak of the necessity of *staminate* plants among the *pistillate*, to produce, or perfect the *fruit*. No doubt, the *pistils* must be fertilized, in order to produce *seeds* that will vegetate. But what do those gentlemen understand, by the "*fruit*?" Do they mean the little single-seeded *akenes* or *nutlets*, which are sprinkled over the enlarged pulpy receptacle,—or do they refer to the *receptacle itself*, which in popular parlance is intended by the term "*fruit*?" If they have reference to the *real fruit*—the *nutlets* which contain the seed,—there is probaly no question (as already intimated) about the necessity of *staminate* influence to produce perfect fruit. But I have a suspicion, that by the term "*fruit*," they mean the delicious *receptacle* which bears the fruit, and if they mean to allege that the *pistils* must be fertilized by the *stamens*, *in order to produce that enlargement of the receptacle* which affords an *esculent substitute* for fruit,—then I have only to say, it is a *question of fact* which I have had no adequate opportunity to determine; and concerning which I, for one, should be happy to receive reliable information. To ascertain the point satisfactorily, would require very careful experiments and observations. Whether such have been made, I am not informed. I may remark, however, by way of *analogy*, that there are instances in which *pistils*, and even *receptacles*, are enlarged, where no *staminate* influence has been exerted. The conglomerate coalescent *pistils* of the Osage Orange (*Maclura*), for example, attain to their full natural size (although the *seeds* are necessarily imperfect,) where no *staminate* plant is in the neighborhood; and, what affords a closer analogy, the including *receptacle* of the *pistillate Fig* is fully developed; when entirely free from any *staminate* influence. Whether the *receptacle* of the *Strawberry* ever enlarges, without the *pistils* being fertilized, (as already stated,) is more than I can tell; but I feel well assured, that any competent authority, who may furnish the information, will make an acceptable contribution to physiological Botany.

W. D.

West Chester, June 6, 1853.

THE STRAWBERRY QUESTION.

MR. EDITOR:—Who among horticulturists has not heard of the "Strawberry Question"—has not wondered at the opposite opinions held by eminent cultivators, and perhaps like myself has been surprised that the spirit of inquiry has not been more generally diffused concerning a subject of so much importance. Is it because our instructors cannot come to a unanimous conclusion upon it, that we pupils in horticulture have been doubtful about expressing our opinions upon it, or have we never studied the subject for ourselves but left them in their wisdom to decide it for us? I was in this position waiting for their decision, but as it was not likely to be forthcoming, I resolved to study the subject for myself, have done so this season, and will give you my experience in connection with the "Strawberry Question."

The points of difference between a staminate and pistillate strawberry flower are so marked that a very casual observer cannot fail to notice them at once, for in staminate varieties the flowers are lax, the sepals of the calyx appear alternately with the petals of the corolla, the stamens occupy the most prominent place in the flower, rising half their length above the central pistils, are very much swelled at the base, and very large compared with the other parts of the flower, anthers broadly heart shaped, large, and producing abundance of pollen. Pistils, loose, long, and having a barren appearance, which is soon proved by their withering away, and leaving the stamens masters of the field. The embryo receptacle when it does exist at all is very much flattened, and in the most of cases cannot be said to exist at all, the pistils being inserted in the thickened cup of the calyx. All flowers that have this appearance in these varieties, very soon wither away and leave this impression on the mind of the observer, that they were surely staminate varieties. But as all staminate varieties do not thus wither away, but many of them produce fruit, it may be asked are the flowers all the same in appearance. It is here where the peculiarities in this class are met with, for there are few but what produce some fruit, and as real staminate flowers could not produce this fruit, it would readily be seen that staminate varieties produce two sorts of flowers; the one where the organs are unequally balanced which produce no fruit, the other where the flowers are perfect and are fruit bearing. The appearance of the flower that will produce fruit, is markedly different from the other—by the shortness of the stamens, the conical shaped receptacle, the pistils stiff and thickly set thereon. The flower is altogether more compact, and is as perfect in its organs as any of the Alpine varieties. The following sorts have proved staminate with me.

Cuthill's Black Prince, Boston Pine, Kittley's Goliath, Alice Maud, British Queen, Ross's Phoenix, and Victoria.

Among pistillate varieties, the flowers are cup shaped, compact, with the sepals of the calyx scarcely perceptible between the petals of the corolla. Stamens seldom visible, and when seen at all they are very minute, not longer than the pistils at the base of receptacle, never showing signs of having fertilizing powers, as the anthers never expand; the whole remains perfectly abortive. Pistils very numerous, uniform, stout, longer than in perfect flowers, and have not such a feathery appearance as in staminate sorts. Receptacle large, conical, always coming to perfection, and the instances where pistillate flowers do not produce berries are very rare, in fact scarcely ever to be met with; at least my sorts have proved so; and it is reasonable to conclude that this has been occasioned by the sorts growing together. The following sorts have proved pistillate with me.

Bourbon Pine, Hudson, Swanson, Burr's Pine, Hovey's Seedling, Iowa, and Moyamensing.

The varieties enumerated, I have growing together (both pistillate and staminate) under what might be called the ordinary mode of cultivation in one place; and in another completely isolated from them, I have a collection of the same sorts which have stood some years longer, and are almost worn out. But this difference of situation, culture, &c. don't at all seem to have affected or in the least degree altered the organs of re-production in any variety; for to me it seems that the character of pistillate or staminate is as permanent and unchangeable as in any other deciduous plant.

A writer in one of the periodicals of the day, supposes it possible that the receptacle of the strawberry might enlarge, or even come to perfection without staminate influence having at all been required. That the experiment of planting a pistillate strawberry in a situation where staminate influence could not reach it and that plant produce no berry, is the fact; as was proved by a cultivator in this neighborhood: but it is to be hoped that the coming season will be taken advantage of by many of your correspondents, for making experiments that will place this question in such a clear and forcible manner before the public, so that all may be convinced, and those interested in the culture of this fruit may take advantage of, and turn to good account the information received. F.

We hope that those of our friends who have made any observations, or have anything to say on this interesting subject will be kind enough to communicate them to us.—Ed.

AMMONIA ON PLANTS.

The subject of the action of Ammonia on plants is exciting considerable attention in England. We copy below from the Gardener's Chronicle accounts of experiments, the first of which is being tried at the Horticultural Society's Garden.

M. Ville's mode of giving Ammonia to plants, with a view to increase their bulk and vigour, is being tried in the large stove in which one of his apparatuses has been placed. It consists of two clear glass bottles with long necks, furnished with tight-fitting corks, in each of which is inserted a small bent glass tube. These two tubes are joined together by means of an India-rubber connection, or small hose, thus forming a communication between the two bottles. In the cork of one of the bottles is an escape tube (also of glass), which is connected (by means of a small India-rubber hose), with other small glass pipes that are laid all along and across the bed, and through which the ammonia is intended to pass, in order that it may be the better diffused among the plants. When the bottles are put to work, one is charged with chalk, on which is poured sulphuric acid, and the other with unslacked lime, over which is poured a solution of ammonia. The result of this experiment will, of course, be published in due time. Its conduct has been entrusted to Mr. Spriggs, the young man in charge of the house, who is to note down its effects daily, and report the same to the Vice-Secretary. In another column will be found some further account of furnishing plants with more ammonia than they can get under ordinary circumstances.

By Mr. Deane, Vice President of the Pharmaceutical Society. Effects analogous to those produced by M. Ville (see last year's volume, p. 755), with ammoniated air on the leaves of growing plants, have been observed by me, as the results of applying solutions of ammoniacal salts to the roots. My attention was first effectively turned to the subject about eight or ten years since, when an extensive grower of Pelargoniums, Fuchsias, and Roses, applied to me for some remedy for the sickly condition of his stock; which, if left unchecked, would insure a very severe loss to him. On examining the plants they were found to be in a starving condition, the roots having filled the pots and exhausted the soil; consequently, the leaves had lost their healthy green colour, and become very pale, with a strong tinge of yellow; the lower leaves were quite yellow, spotted, and falling off. The natural remedy was obviously fresh potting, but as the plants were already in pots best adapted to answer the purposes of the grower, some other remedy had to be devised. I therefore

made a very weak solution of sulphate and carbonate of ammonia, and therewith watered the roots of the plants once a day, in the evening; and to insure any observed results as to the effect of the ammonia, certain rows of the plants on the stage of the greenhouse were selected for the experiment. In a few days the effects of the ammonia were most marked and satisfactory. The leaves began to put on a very remarkable appearance, the course of the veins, or spiral vessels, becoming perfectly green, the colour commencing at the basal portion of the midrib, and thence spreading through all the reticulations, until the tissues were perfectly restored to their normal and healthy condition; and, in fact, the plants thus treated looked more vigorous than they had ever done before, being much darker colour and firmer in texture. The contrast between these plants and those which had received no ammonia left no doubt about the efficiency of the application. I forget the effects upon the flowering of the Pelargoniums, but there was certainly no deficiency of flowers on the Fuchsias and Roses; they were, moreover, finer and better coloured than usual. On a subsequent occasion a gentleman's gardener applied to me in a similar dilemma; he had a house full of fancy Pelargoniums preparing for a flower-show, at which he expected to take the first prize. Just as the trusses of flower buds were emerging, and there was every prospect of a good bloom, the lower leaves of the plants began to turn yellow and spotted, and then to fall off, leaving the plants bare, where the foliage was considered an essential point of beauty. I examined the roots and found them nearly filling the pots, it was therefore evident there was not sufficient nutriment left in the pots to meet the extra demand made by the large number of flower-buds; the latter were, consequently, deriving their nourishment from the leaves—the natural storehouse of the food of plants during the growing season—and of course exhausted the lower leaves first. They were treated precisely as in the former instance, and with the same results; the lower leaves became healthy, and the flower-buds progressed favourably to maturity, being of good form and colour. The success of these experiments became known to other gardeners in the neighbourhood, some of whom were equally successful, while others did not derive that satisfaction from the use of the ammoniacal solution, either from not understanding the principle of its application, or from a desire to accomplish more than they were capable of, when it frequently happened the plants became too vigorous to flower well. There is no doubt but that M. Ville is correct in stating that the flowering is arrested if the application of ammonia is made at a certain period of the development of the flower-buds. Few plants if grown too vigorously will flower well, if at all. A certain check in their growth is absolutely necessa-

ry, and the summer's sun or winter's cold, under ordinary circumstances, effects this perfectly in this climate—the former by perfecting and condensing the elaborated sap, and the latter by arresting vegetation altogether. Too much moisture and shade cause those parts intended for flower-buds to be developed as leaves. In the Aloe tribe when the flower stem is thrown up, it is at the expense of the outer leaves, the elaborated juices of which it appropriates, the roots at this time not being in action, because it is towards the close of a long period of dryness. If when the flower-stem is beginning to rise, the roots are watered, all further development of the stem is arrested, the leaves only being developed. The same thing takes place with many bulbs whose period of flowering is not the same as that for leafing. Many Cape bulbs follow this law; for example, the *Hæmanthus*, the flowering of which is at the expense of some one or more of the outer coats. If these plants are watered at the wrong period, or if they have had not that proper rest which Nature designed they should have under the influence of a roasting sun, such as their native country affords, no flowers will be produced, but in their stead a vigorous development of leaves. It would appear, therefore, that the arrest of development of the flowers and fruits of the plants treated with ammonia, is not so much the result of any specific property possessed by this substance, as by its bringing about artificially those conditions which may occur naturally, or be produced by other means. Also, that the application of ammonia to plants may be attended by results varying according to the conditions under which it is applied, and the object it is desired to obtain. The following is the formula for the solution alluded to in the previous note by Mr. Deane:—Sulphate of ammonia, 7000 grains; sesquicarbonate ditto, 1000 grains; water, 80 fl. oz. Dissolve. Of this solution one fluid ounce to a gallon of water will make a solution sufficiently strong for all ordinary purposes.—*Pharmaceutical Journal*.

CALENDAR OF OPERATIONS.

DISBUDDING.—This operation does not appear to be sufficiently recognised in its proper sense as distinguished from pruning and pinching. In performing these latter operations we remove a portion of the growing shoot, in the former case the young bud is removed as soon as it can be rubbed off. These operations are therefore quite distinct, and their distinction is of much importance. Most fruit cultivators are aware that trees suffer materially by suddenly depriving them of a large portion of foliage while in active growth, and expedients are resorted to in order to render the operation less injurious. In spring when the buds burst, attention should be directed

to the quantity of young shoots desirable either for fruit or uniformity of growth; these being secured all others should immediately be *rubbed* off. As growth proceeds luxuriant shoots are *stopped* or their points pinched off, removing more or less of the shoot, according to the object to be attained. If the plant is very luxuriant, more leaves may be removed and if *every* shoot upon a tree is operated on in this manner it amounts to a severe check on its growth. In the case of young trees, or weakly ones, where a certain form is desired, the young growing point should be bruised without removing any of the elaborating foliage, securing density of habit without any perceptible check of growth. Suppose a shoot that has grown 12 or 14 inches to be pinched back one half of its length, the uppermost bud will burst again and the others remain comparatively dormant; but allowing the same shoot to have been checked in its longitudinal growth, by pinching or bruising its extreme point, it will be found that all the lower buds will be benefitted and several additional shoots produced. We have alluded to this subject more particularly at present as we are aware of having occasionally made use of the term *pinching* when *disbudding* would have been the more appropriate expression.

STRAWBERRIES.—Preparations should now be in progress for securing plants for early forcing next spring. Various methods are adopted to get strong plants, such as filling small pots with rich soil and plunging them in the strawberry patch, introducing a young plant on the pot, and removing into larger ones when rooted. Others again prepare full sized pots at once and place them in this manner, securing the young plant in both cases with a small stone laid on the surface. When close attention is paid in watering, these plans are good. An equally successful and less troublesome method is to prepare a few square yards of ground in a somewhat sheltered situation, manuring it well and digging deeply, and filling it thickly with young plants. They should be partially shaded for a few days, and duly watered. In the course of three or four weeks they will lift with good balls of earth and are potted at once in fruiting pots. Pistilo-staminate or hermaphrodite varieties are found to produce better when forced early than pistillate sorts.

Root pruning of fruit trees is sometimes commendable, and the present is the proper season for its more immediate beneficial effects. It is mostly performed on young vigorous trees that show no disposition to fruit. By cutting away some of the strongest roots at this time the supply of sap will be lessened and the wood ripening process accelerated. No fruit need be expected from badly ripened wood. In nine cases out of ten the non-appearance of fruit on healthy trees arises from this cause. Mild autumn weather induces growth to a late period and sudden frosts arrive before the wood is sufficiently matured. This is more particularly noticeable on soils

inclined to be wet, and here again we perceive the necessity of underground drains, in order to remove surplus water. It is an exceedingly erroneous idea that drains are worse than useless in localities where long droughts are of frequent occurrence. The truth is that draining enhances humidity during hot weather, since it enables the soil to exercise its absorbing properties to the fullest extent, there being more air in the soil water is retained in its pores, constituting a reservoir holding a lasting supply when other sources fail.

RENOVATING OLD TREES.—Most satisfactory results have been obtained from old and apparently worn out trees by changing the soil about their roots, or applying a top dressing of wood ashes, guano, salt and plaster in equal quantities, allowing about one bushel of the mixture to each tree. If nothing better is convenient, a heavy dressing of well made barn manure forked in about the roots will have a decided effect. The absorbing points of the roots extend a considerable distance from the trunk, therefore, the principal part of the top dressing should embrace a circumference at least equal to that of the branches. It might be considered unnecessary to mention this *very* apparent fact, were it not usual to observe manure applied to the stem instead of the roots.

GRAPES UNDER GLASS will now be approaching maturity. Dryness both in soil and atmosphere favors this process, still they must not be allowed to suffer for want of moisture should the weather prove dry. The young growth may be stopped more rigidly as the ripening process proceeds. This will concentrate the sap and strengthen the buds for a future crop, if pinched back too severely these buds may start into growth, which must be guarded against.

OUT-DOOR GRAPES will require attention in thinning out lateral shoots and stopping others especially those on bearing shoots. Thinning out the berries is seldom practised on these, nor, indeed is it always necessary. Occasionally, however, the berries are so thickly placed that room is not afforded them to swell out and ripen properly. By thinning out a few of the most central and smallest berries, the fruit will ripen earlier and be much improved both in size and flavor. S. B.

AUGUST.

FLOWER GARDEN AND PLEASURE GROUND.

This is the month many prefer to plant their evergreens, and it is perhaps as good a time as any. Take advantage of a "wet spell" for the operation. Be particularly careful that as many roots as possible are preserved. If this can be well attended to, *trees of any size* can be moved suc-

cessfully. It becomes a question of power—of profit and loss. If any amount of power can be applied, and expense is no object, the largest trees will move as easily as small ones. In moving an evergreen 20 feet high, I commence to open my "trench" 10 feet from the base of the trunk, go down about two feet, and continue to undermine and lay bare the roots their full length, right up to the collar of the tree. I care nothing for "ball of earth." If I have a good supply of hands at the job, I only care to keep them aside a little to prevent injury by the operations of the workmen. If I have but few men, I roll the long roots, as fast as they are exposed; in mats to keep them moist. For mechanical means and adaptations to take out the tree and convey it to its destination, an intelligent workman is never at a loss. Trees taken up in this manner scarcely miss the change; and besides after they are transplanted they require no staking, as they are capable of withstanding the strongest wind through their long roots.

The broom should be well applied to lawns at this season of the year, even more sedulously than in spring. Many species of weed become so dwarfed by the summer's drought, that they flower and fruit below the reach of the scythe, and can only be kept down by the hard sweeping. I have seen some lawns almost ruined by these weeds, especially by one of the nettle tribe. (*Pilea pumila*.)—Conclusion in next number.

It is a pity that the rules adopted by Florists are so very rigid, that unless a flower equals a certain standard in shape and markings it must be rejected. Last week we had submitted to us by Mr. T. F. Croft, a beautiful seedling Verbena, a lilac with a broad stripe of white down each petal, quite distinct and very handsome, but the petals were too narrow, leaving a large space between each one. This must condeme it as a Florist's flower, but to all who want a handsome and distinct variety it will be desirable. He calls it his No. 3. It is in style of Iphigenie.

The article on Tile draining in the last number should have been credited to the Ohio Cultivator. We never intentionally copy articles without credit. We wish that Dr. Warder of the Western Horticultural Review were as conscientious.

ERRATA.—In the report of the Maryland Horticultural Society, The Winter Bon Chretien pears were shown by Mr. Fuss, not Mr. Feast as printed. The premium for strawberries was for "the best 4 distinct varieties, 1 quart each.

THE FLORIST

AND HORTICULTURAL JOURNAL.

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[No. 8.]

The non appearance of this number without a plate is caused by the fact that we could not get one in time—and our wish to issue two numbers at once in order that in future we may come out on the first of each month induced us to disregard that for the present. The number for September, however will make up the deficiency, as we will give then a double plate, the subject being one of the beautiful species of *Rhododendron* introduced from the Himalayas.

We are happy to be able to assure our friends and subscribers that the success of the *Florist* is very encouraging and that we will be in a few days in the receipt of all the plates for this volume. Our subscription list has almost doubled since it came into our hands, and we want but a little more effort on the part of our friends to place the magazine in a position which will make its continuation a pleasure to all concerned in it.



RANDOM NOTES ON FRUITS.

By a Maryland Subscriber.

MR. H. C. HANSON, DEAR SIR:—

Believing as I do, that no one in faithfully recording his experience and observations, can fail in imparting more or less knowledge to others, I offer no apology to your readers for intruding my opinions, since they are the result of personal attention to fruit growing, and a wish that others of more experience will take up the subject in your pages.

Grapes—Now that a certain cure for the prevention and eradication of mildew in graperies has been found, I hope that some one will step forward with a specific for the black rot on our arbors. It is the general opinion, I believe, that much wet during the present month favors this disease. This season has been particularly dry, and so far I have not detected its appearance. Should the rot be induced by the roots being wet and cold with a hot sun acting on the leaves, it would seem apparent that a dry soil should be secured, either by selecting an elevated position, or laying down under ground drains. While visiting a friend during the past winter I found him preparing the border of a small grapery. The original soil, which was of a clayey character, had been removed to a good depth, and fresh soil and compost put in its place. The work was well done, and no pains spared to render it perfect in every respect, good drainage being provided to carry off extra wet. Notwithstanding, it occurred to me that the end in view would be equally attained without the trouble and expense of excavation, by merely laying the fresh soil on the old surface and mixing the whole thoroughly together, I would rather build a two feet wall to hold up the soil than dig down an equal depth for the same purpose.

Among the various foreign kinds that I have tried I find the Sweetwater, Zinfindal and Frankenthal give most satisfaction. The Sweetwater bears moderately well, but the fruit to my taste is insipid, and inferior to a well ripened Isabella. Both Zinfindal and Frankenthal are good grapes, bear abundantly, and of vigorous

growth. Indeed the latter is little inferior to the Black Hamburg, from which it is said to have originated. I have also the B. Hamburg out of doors some seasons; I gather tolerable fruit, but in general it is rendered useless by mildew. So far the present season they are perfectly clean. Herbemont's Cluster is a good fruit, regular and abundant bearer. The Catawba seems very susceptible of cold and wet while setting its fruit, and in some seasons the bunches are rather thin. Altogether it seems less robust in its constitution than the Isabella. On this account the northern growers prefer the latter, while in the south the Catawba is more generally planted.

Strawberries.—In preparing the soil for these I am particularly careful in having it well broken up to a depth of 18 inches, putting plenty of manure on it, and also digging in a heavy dressing annually in the fall; my object being to produce superior fruit rather than a large number, I generally thin them out after the fruit is set, taking care to leave fruit of all ages in order to keep them ripening in succession; by this means every berry is a *specimen*. I have tried various systems of management with regard to winter and summer covering, and prefer short grass or cut straw for this purpose. From the high encomiums given to tan bark I was induced to make trials of it, I think it has a bad effect on the soil, and no particular good effect on the fruit. Hovey's seedling is my standard bearer, although there are many others of great merit. Black Prince makes a beautiful variety on the fruit table on account of its colour, but the flavor is simple and watery. Ross' Phoenix, Keen's Seedling and British Queen, give very superior flavored fruit, although not so very prolific. It seems to me that amateurs will prefer these sorts before those whose only recommendation is a numerous crop. McAvoy's Superior has done very well, I have not been able to discover its superiority, although it is far from an inferior fruit. With regard to the result of mixing the sexes I have nothing definite to note. As I have already remarked the soil is made very rich, and although I always have both pistillate and staminate varieties in my grounds, no care is taken to mix

the kinds, and both produce to my satisfaction. I prefer a few large to a quantity of small fruit, and in this respect some of the staminate kinds just suit my views.

Pears. Of these I have some sixty varieties all on the Quince. Many of my earliest planted trees are doing badly; this I attribute to want of proper preparation when planting. Being a novice in the business I had holes about two feet diameter and one deep made for them, using compost for planting them in. They made more growth the first year than ever they have done since. Latterly I have had the ground better prepared, by spreading six inches of rotted sod, lime rubbish, manure, ashes, &c., on the surface, and working all up to a depth of eighteen inches. Nothing could be more satisfactory than the healthy appearance and abundant crops the trees planted after this preparation. I find great advantage from pruning the strong shoots during the summer; it improves the appearance of the tree by causing it to produce shoots and fill up in lean parts, which equalises the growth and prevents strong growing branches from gaining headway and absorbing all the nourishment. I also fancy that summer pruning gives you more fruit at least on the older branches. The check given by pruning, sets these lower buds in action, and developes their latent fruit producing capabilities. The winter pruning I perform early, generally before all the leaves are fallen, but since I have practised summer pruning, I find that there is not much left for the winter cutting. As soon as they are pruned in the fall, I sprinkle about a quart of guano round each tree and fork it in the soil paying great attention not to have any of the roots injured; I then have a good dressing of well composted manure spread under each tree. In spring when the weather opens the remains of this manure is also mixed with the soil. I have found great advantage from mulching trees the first summer after planting, when once they get established I prefer to have the soil uncovered, so that the surface can be occasionally stirred and broken up when beaten down with heavy rains, with this treatment they grow luxuriantly. There is much difference in their growth on the quince, while some are grown three

feet others will not make as many inches. The Seckel does not succeed well, fruit small, but exquisitely flavored. On the contrary I measured young shoots on the Dix the other day three feet in length, although the tree was only planted last spring. Beurre Giffart I gathered yesterday (July 20th,) full ripe; it is a beautiful fruit, and as an early good pear will be largely planted when better known.

The Easter Beurre I consider the best late, I kept some of the fruit until the end of March, and they were excellent, as juicy as a fresh gathered peach. Glout Morceau and winter Nelis are also fine late pears. Louise boune de Jersey grows freely and produces the greatest quantity of beautiful, fine fruit. Vicar of Winkfield does not do well here, the fruit cracks even on young trees, and limbs are constantly dying off, sometimes the whole tree. I have observed it the same on several places. Otherwise it is a heavy bearer, although I consider the fruit of secondary quality. Fondante of Autumn is a free grower and bears well, fruit of fine quality. Tyson and Bartlett both fine early sorts, the former grows more luxuriant than the latter on the quince; Bartlett is very large and first rate. Dutchess d' Angouleme I think a first rate pear in every respect, tree thrifty and fast grower, fruit large and produced freely. Some complain of grittiness in this fruit. I do not find any if gathered two or three weeks before eating. All pears, however, are better for being gathered sometime previous to use, indeed some are not fit for anything otherwise. White Doyenne I consider equal if not superior to the Seckel in eating qualities. Doyenne d'ete is very early and on this account worthy of a place in all collections, and is a good table fruit if pulled and ripened in the house, when allowed to *fall* from the tree it is tasteless. Bloodgood is also a fine early pear of good flavour; indeed fine pears are now so plentiful, that it is difficult to say which is best. There are many excellent sorts of which I have no practical acquaintance. If I were to plant fifty trees to ripen fruit in succession for eight months in the year confining myself to 12 varieties I would probably make a selection as the following:—1 Doyenne d'ete, 3 Beurre Giffart,

2 Tyson, 3 Bartlett, 4 Seckel, 4 White Doyenne, 4 Louise bonne de Jersey, 6 Grey Doyenne, 6 Dutchess de Angouleme, 6 Glout Moreceau, 6 Winter Nelis, 6 Easter Beurre. My sheet is full, if this finds favor in your eyes you may probably hear from me again.

Respectfully Yours, A. R. N.

For the Florist and Horticultural Journal.

MR. EDITOR:—

The question is often asked, where can a choice collection of Florist's flowers be got, such as do not need the protection of a greenhouse with fire through the winter, nor a perpetual watering during summer? In the hope that some of our nurserymen will answer the inquiry, I will, with your permission, give your readers my recollection of a Florist's garden, so as to give them some idea of what really constitutes a Florist, for the name is much misapplied among us.

William Hatelie, W. S. of Duncliff Cottage, Murrayfield, a mile west of Edinburgh, Scotland, was (and may be yet) an amateur florist of refined taste. His garden I think was forty-eight yards wide and sixty yards long, and was enclosed by a stone wall sixteen feet high, with a small stable and carriage house on one corner; the cellar of which was divided into an apartment for keeping soil pots and other garden lumber, and another to hold the cleanings of the stable. The house was near the southern end; it was a two story house of white freestone with an observatory from which a beautiful view could be obtained,

One third of the ground was kept as a back ground, and was used as a nursery for the front garden and for growing small fruits and small vegetables, it was divided from the front by a trellis which was covered with dwarf pear trees. The wall of the back portion was filled with choice fruit-trees and that of the front with flowering shrubs and vines. Next to this was a border eight feet wide bedded with different kinds of flowers. There was no incongruous mixture; every genus stood by itself, every species or variety was

saperate—every plant stood singly so as to show its flowers to the greatest advantage. The gravelled walk was forty inches wide with box edging on the border side. The centre ground inside of this and around the house was lawn, studded with choice roses and dwarf shrubbery. Many ingenious flower beds were cut out on the grass, and among them were four of the same size and shape bottomed and sided with flagstones and eighteen inches deep, having a flag stone walk running through the middle.

These beds were planted with the owner's most favorite genera. A neat tent was put over each of these beds while the plants were in flower which greatly prolonged the flowering. The same was used for all of them: the frame was of light iron easily taken apart and put together; the uprights being let into staples run into the flag: it had a span roof with a door at each end in the canvass fastened by buttons. First it was put over the Hyacinths, next over the Tulips, then on the carnations and picotees, and last over dwarf double Ranunculus. The other beds on the lawn were each planted with a single species, so that no two resembled each other: and each bloomed at a separate time. The *Crocus* in all colors would drive away winter and give us a foretaste of spring; these were succeeded by the *Hyacinth* with its waxy flowers of all colors, and their sweet odour, the gaudy *Tulips*, the fragrant *Carnations* and *Picotees*, beautifully laced and pencilled, and the large headed *Ranunculus* surpassed conception. There were also *Primula auricula* and *Polyanthus* of brilliant sorts; broad petalled and beautiful colored *Pansies*, double quilled *Calistemma*, beautiful double quilled *Bellis*, whose variety *prolifera* was very singular, double *Cheiranthus* of matchless fragrance and in colour from pale yellow to dark crimson, *Mathiola* all double and from pure white to crimson, (the cape stock exquisitely rich), *Dianthus Barbatus* and *Chinensis* double white shaded to velvety maroon, and many other bulbous and other plants kept up the beauty of the garden throughout the season. There was always something to admire, nothing common or coarse-growing was admitted there, and the fine keeping of the place made it always lovely; every thing was in good taste and

always in order; though it was small yet it was a 12 months journey to get through it; if there be a paradise on earth surely it is Duncliffe Cottage.

There were but six sashes on the place, a brick pit with two and two cold frames of twos ashes each; young plants of *Cheiranthus* *Mathiola*, *Dianthus*, *Primula*, &c., were wintered in pots and protected in the cold frames in winter, and a hot-bed was made in the spring for raising seedlings, which were pricked out into the cold frames after the other plants were set out. Many new varieties have originated there. I was but a favored visitor, as admittance was rarely allowed. It was said that Mr. H. paid twelve pounds for a bulb of the Tulip Louis XVI and would have ridden miles to see a new Carnation or Auricula; he had too aviaries of songsters, and also an Owl and an Eagle; the Owl was named "Cameron of Lochiel," and the Eagle "George Washington."

Respectfully, WALTER ELDER.

Philadelphia, July 7, 1853.

NOTES ON GARDENS.

PASCHALL MORRIS & Co., WEST CHESTER, PA.

Having an hour to spare in this town, I took a stroll through the grounds of these gentlemen, and I was agreeably surprised in a place seemingly so local, to find so much attention and space given to ornamenting shrubs and trees—the grounds extended over thirty acres, and the variety was very great, as well as the stock of each kind. What struck me most pleasurably, and afforded me most interest was the assortment of evergreens; and it was a few new facts which I learned for the first time in connection with some of them that induced me to prepare these notes for you. In these times when the demand for evergreens is approaching to a sort of fever, it is well to know what kinds are decidedly hardy. The *Auracaria imbricata* has been given up in many quarters; several trials having proved unfortunate. Here were many which have stood out two winters. In the severe winter of 1851-2 they mostly lost their side shoots. From the appearance of these plants I have no doubt that when the specimens are gradually hardened, they will prove quite hardy—*Juniperus excelsa*, seemed more at home, it

will be a powerful rival to our *J. Virginiana*, *J. recurva* or *pendula*, as a large stock of it showed, was as hardy as the rest. There was here also another species or variety of *Juniperus* which I had not met with before, which Mr. M. informed me he received under the name of *J. ericoides*. It is a very distinct looking kind, very much like young *Cupressus funebris*—a fine specimen of the latter was growing in a pot, and which I understood was destined to stand the ordeal of the next winter. There was, in a very exposed situation, a fine specimen of *Abies morinda*, perhaps more properly *A. Smithiana*. The difference between this specimen, and the *A. excelsa* or Norway Spruce, was very striking. The new family embraced numerous representatives of all nations, English, Irish, and American, besides a good stock of that "dear little thing," lady like speaking, the *T. adpressa*, also proven hardy. The *Silver Fir* (*Picea pectenata*) seemed perfectly "at home," thinking it easy work to throw out eighteen inches of a leader in one season—when young it frequently loses its leading bud in the winter, but it gets better of this misfortune as it grows. In a large pot I observed a fine specimen of another *Picea*—*Webbiana*, which I believe has not proved perfectly hardy—*Libocedrus chilensis*, and many other of the newer kinds were also here in the same dubious company. The regularity and cleanliness of the evergreens and their great variety allured too much of my attention, and I had but a few moments left to run over the collection of deciduous trees and shrubs. A fine stock of *Populus angulatus*, the cotton wood of the Mississippi, struck as "just in time," as I am satisfied this tree is destined to become very popular as a shade tree for towns. Its rapid growth, large leaves and spreading head, its cleanly habits, easiness of removal and propagation, suggest it as the successor of the *Ailanthus*, and similar things that have been "tried in the balance and found wanting." The cottony down which it throws out while perfecting its fruit, will be thought objectionable, but it is a valuable property when compared with the stench of an *Ailanthus* in flower. I may remark in passing, that the Linden, both European and American, seem much more prosperous in West Chester than in Philadelphia, and are in reality, an ornament to the place. The sugar maple is also very common, and has a beautiful appearance; not perhaps so spreading in its growth as the Silver, but not so liable to be broken by high winds. I saw several Silver maples completely "wind broken." The subject of shade trees for towns has become one of the "great questions" of the day, which may serve as my excuse for dragging it in as a finale to my few notes of the highly interesting ground of P. Morris & Co. *

WAY SIDE SKETCHES.

BAYWOOD NURSERIES.—Availing myself of a courteous invitation from the proprietors of these nurseries; I was greatly surprised to find so extensive an establishment in that section. Their grounds are situated about four miles from Pittsburgh, within view of the Allegheny river, and one mile north of the village of East Liberty, which lies spread out like a map down in the Negley valley—seemingly shut out from the busy world by the lofty river hills.

Fostered by the liberality of the citizens of Pittsburgh and vicinity, and knowing the advantage of their position, Messrs. Kennedy & Co. have spared no pains or expense to bring their business to a high state of perfection, and to show the beauties of scientific landscape gardening. Although lately commenced, their extensive improvements and flourishing stock are an evidence of their practical abilities and enterprize. They have two very large, span roof greenhouses, heated by steam, and a propagating house; also a span roof 40 feet by 20, fitted up on an improved principle, and heated with hot water on the tank system. This house contains as fine a young stock as ever it has been my fortune to see, taken I believe from their European importations of last fall and spring. Their show house 80 feet by 30 is a splendid structure—planted conservatory fashion: (viz.) the plants turned out of the pots into a bed prepared for the purpose, and occupying the whole centre of the house; whilst a stage for pot plants 3 feet wide all round the house is well stocked with flowering plants suited to the season, such as Geraniums, Calceolarias, Fuchsias, Achimenes, Gloxinias, and some fine specimens of the beautiful *Torenia Asiatica*, with many other plants equally fine. Their collection of Roses, Carnations, and Verbenas in varieties, were just in perfection, showing every shade in color, from a pink white up to the deepest purple. Of ornamental trees and shrubs, they have a full stock, and though the plants are young, they show signs of a high state of cultivation, and promise a rich stock to propagate from. A varied stock of Fruit trees, some distance from the ornamental departments, look well; and although the season has been unusually dry, their mode of cultivation has prevented the evils I have witnessed elsewhere occasioned by drought. Weeds they seem to have an aversion to, as none are to be seen amongst their plantations. After noticing a large collection of new varieties of potatoes, corn, &c. which in appearance promise their owners an ample return for their improved system of cultivation, I retreated to the shade of a grove of lofty pines, in the rear of the residence of Mr. Negley, one the proprietors, who has lately erected a magnificent building in the Elizabethan style. I found "Elfin Wild," the name given to this portion of the

ground, the most enchanting and romantic spot I ever beheld; it seemed as though nature in a frolic had vied with the art of man—the rapid water of a stream which comes winding down the hill sides, has worn its way for ages through the solid rock, seeking a humble bed hundreds of feet below. On either side the high towering rocks are clothed with velvety moss, mingled with Ferns and Rose Bay Laurel which have found a home on some broken ledge. Indeed I may be allowed to say that Elfin Wild although in miniature has no equal. I could say much more about the beauties of the place, but I have already trespassed too much upon your limits. T. C.

PLANT A TREE.

Plant! plant!! plant!!! Three times have we written down the word, in order to impress it upon the mind of the reader. God plants over the fair face of the world. The sprouting acorn, the winged seeds of the pine, and the maple, and the ash, the bright red berries of the dogwood, the holly and the hawthorn, the blue clusters from the evergreen cedar, and the pearly fruit of the mistletoe, high up in the old oak-top, all find a spot as a birth-bed in which to take root and flourish.—Some grow in the mellow mould where shade and moisture protect and invigorate their tenderness—some, with the pitying spirit of an angel's guardianship, seek their resting places where man has wrought all his ruin, on the bare bosom of the earth, and strive to hide her naked deformity by outspreading their evergreen arms—some cling with their viscid coverings to the rough bark of ancient trees, as if they wished to add newer and greener chaplets to their decaying crowns—some seek the crevices of the barren rocks and creeping up ruined walls bind together, the fissures gnawed by the cankered tooth of time, in their tender embraces—all obey those laws of vegetable creation, which are ever active in renewing what waste, and heedless considerateness, and prodigal destruction, have so ruthlessly ravaged. Go then, lover of nature, to the scathed hill-top, once crowned with the brawn of a mighty forest kingdom, and plant a clustering knot of oaks and cedars. Go to the sun scorched brook, as it glides noiselessly like molten lead through your field, and protect its bright waters by the friendly shade of graceful maples and wide spreading beeches. Go to the roadside and people these monotonous plantation lines with the walnut, the red fruited mulberry and the maronia—their shade will gladden the heart of the traveller—their fruit will cause unborn children to bless

“The hand that planted these old trees.”

Add living monuments, and multiply them upon the earth. It was a beautiful custom, that, when the betrothed planted each a tree, standing side by side, through years that come, their branches interlocked—their flowers kissed each other, and keeping vigils of love through storm and through sunshine—they remained living sentinels over that affection which never dies. We once new two of earth's better spirits, gentle in their natures, lovely in their angelic semblance, bewitching in their beauty, and thus they planted their affections side by side in front of the old homestead—those emblem-cedars grew, and when the fair hands which had planted them, were twining wreaths with the cherubin around the altars of the blessed, they still stood flourishing over the decay of the past. But the old homestead has passed into the hands of strangers, the beautiful lesson taught by these trees has been forgotten, and to make visible the glaringness of modern improvement, they too, like their sweet emblem spirits, are numbered amongst the things that once were upon this earth.

And again, when a child is born a birth-day tree should be planted. We know an elm which marks the natal hour of a matron in a neighboring village, and we never pass that early budding tree without thanking the honored father who taught us a good lesson when he set its roots in the mellow soil before his door.

The hot sweltering walls of our cities call for trees—trees to feed upon the vapors which spring from over-peopled quarters, and convert them into healthy-breathing atmosphere. The shade of trees is more genial and grateful to the pent-up dwellers of cities than it is to most of those who ramble in sylvan groves, during the free and unrestrained years of a life in the country. Let those then, who are forced to dwell in the busy marts of the world, be blessed by shade—shade in the streets, shade in the capacious parks and pleasure grounds. God made trees enough, so that every human being could revel in their shade. The tawney savage seeks his leafy home, under the Titans of this Western world—the sons of the desert bless Allah for the refreshing shade of the graceful palms, and the white man, who claims to be civilized, alone evinces a thoughtless spirit of tree-destruction. For him there is no bound or limit, and the whim of a moment is frequently gratified at the expense of centuries of beautiful forest growth.

Is that new era coming when we are to be planters instead of ravagers? Will the few examples of ornamental landscape adornment and improvement, be copied and become working texts to the millions? Are we to hear of forests plantations to be reared upon our old fields? Are the glaring eye-straining white houses of the land, to be soon hidden by graceful forest

trees, such as abound within the reach of every cultivator of the soil? Is our country to be made picturesque and lovely by the grouping of the elegant specimens which are the pride of our forests, around our homesteads? Are we at last to become a nation with common sense? We have often almost worshipped the glorious avenues of live oaks—beautiful in their morning drapery of solemn moss, which add such distinct charms to the lower sections of our state. We have admired the virgin-flowery magnolia, and ask why is it not made welcome to every home in the state. The oak tribe embracing nearly half a hundred varieties, and the lofty tulip trees, and the graceful elms, and evergreen holly, and the cedar and the pine, all afford much characteristic beauty to the true lover of nature. There is still a lower fringe, of smaller trees and shrubs, upon the bosom of the earth, which interspersed with these, add bizarre ornaments to the grouped subjects of the forest. But when we write of these, we have brought to our mind's eye a picture, pen-painted by WILLIS, which, striking upon the chords of the heart through a vision of the satisfactory and beautiful, will cause all who read it, to love the trees, which a sense of duty to coming ages has caused them to cluster as enduring friends around them. For the benefit of such, we extract from his "Letters from Under a bridge," a *Poet's planting of a tree*.

"As I look out from under the bridge, I see an Oriole sitting upon a dog-wood tree of my planting. His song drew my eye from the paper. I find it difficult, now, not to take to myself the whole glory of tree, song and plumage. By an easy delusion, I fancy he would not have come but for the beauty of the tree, and that his song says as much, in bird-recitative. I go back to one rainy day of April, when, hunting for maple saplings, I stopped under that graceful tree, in a sort of Island jungle, and wondered what grew so fair that was so unfamiliar, yet with a bark like the plumage of the pencilled Pheasant. The limbs grew curiously. A lance-like stem, and, at regular distance, a cluster of radiating branches, like a long cane thrust through inverted parasols. I set to work with spade and pick, took it home on my shoulder, and set it out by Glemmary brook, and there it stands to-day, in the full glory of its leaves, having just shed the white blossoms with which it kept holiday in June. Now the tree would have leaved and flowered, and the Oriole, in black and gold, might perchance have swung and sung on the slender branch, which is still tilting with his effort in that last cadenza. But the fair picture it makes to my eye, and the delicious music in my ear, seem to me no less of my own making and awaking. Is it the same tree, flowering unseen in the woods, or transplanted

into a circle of human love and care, making a part of a woman's home, and thought of and admired whenever she comes out from her cottage, with a blessing on the perfume and verdure? Is it the same bird wasting his song in the thicket, or singing to me, with my whole mind afloat on his music, and my eyes fastened to his glittering breast? So it is the same block of marble, unmoved in the caves of Pcutelicus, or brought forth and wrought under the sculptor's chisel, yet the sculptor is allowed to *create*. Sing on *my* bright Oriole! Spread to the breeze your desiring finger, *my* flowering tree! Like the player upon the organ, I take your glory to myself; though, like the hallelujah that burns under his fingers, your beauty and music worship God.—*South-Agriculturist*.

A LIQUID FERTILIZER FOR CHOICE PLANTS.

BY AN AMATEUR.

DEAR SIR—I am confident that there are many of your lady readers, and perhaps many of the other sex, who are puzzled among the many *new manures*, and having failed with some, and injured their plants with others, they end by raising only sickly and meagre plants, when they might have them presenting a luxuriant and satisfactory appearance—with leaves of the darkest green and flowers or fruit of double the usual size.

Having made a trial for three years past, with a perfectly safe and satisfactory liquid fertilizer, which appears to suit all kinds of vegetation, which is clean and easily applied, and procured without difficulty, in any town, I confidently recommend it to your readers, especially those who wish to give especial pains to, and get uncommon results from, certain favorite plants—either in pots or in the open garden—plants, whose roots are within such a moderate compass, that they can be reached two or three times a week, if not oftener, by the watering pot.

This liquid fertilizer is made by dissolving half an ounce of sulphate of ammonia in a gallon of water.

Nothing so good can be cheaper, and the substance may be obtained at almost any apothecary's.

Now for the mode of using it. I may say, at the outset, that weak as the solution appears to be, and is, if plants are watered with it daily, they will die—just as certainly as a man will who drinks nothing but pure brandy.

The right way to apply it is, to water the plant with this solution every sixth time, the other five times with plain water.

The proportion is so simple, and the mode of using it so easy to understand, that the most ignorant person cannot possibly blunder about it—if he count six. If we prepare the solution occasionally, and water our plants in pots every Saturday, with this ammonia water, and all the rest of the time with plain water, we shall have a safe rule.

The result will, I am sure, both delight and surprise every person who will make a trial of it. It has become such an indispensable thing with me, that I regularly mix a barrel of it every Friday, and use it on Saturday, upon any plants that I particularly wish to invigorate and stimulate. I do not know that I have seen a single instance of its disagreeing with any plant—ammonia being the universal food of vegetation. Of course, the more rapid growing plants—those with foliage that perspire a great deal—are most strikingly benefitted by it. Of course, also, plants that are at rest, or not in a growing state should not be fed with it; but any plant that is about starting, or is actually in a growing state, will not fail to be wonderfully improved by it. Many plants that have fallen into a sickly state by reason of poor, or worn out soil, will usually, in the course of a month, take quite another aspect, and begin to develop rich, dark green foliage. I will enumerate some of the things that I have had great success with.

Strawberries.—Beds of indifferent appearance at the opening of the spring, last season, after being watered four times with this solution, grew very luxuriantly, and bore a crop of remarkably fine fruit. This year I have repeated the experiment on half of every bed; both foliage and blossoms are as large again on the watered, as on the unwatered bed; and, by way of comparison, I have watered some with plain water also, and find, though rather benefitted, (for the strawberry loves water,) they have none of the extra depth of verdure and luxuriance of those watered with ammonia.

Early Peas.—A least a week earlier than those not watered, and much stronger in leaf and pod.

Fuchsias.—A surprising effect is produced on this plant, which, with the aid of ammonia water, will grow in very small pots, with a depth of verdure, a luxuriance and a profusion and brilliancy of bloom, that I have never seen equalled. Old and stunted plants are directly invigorated by it.

Dwarf Pears.—Some sickly trees, that I have given the best attention for three years previously, without being able to get either good fruit or healthy foliage, after being watered four times with the solution—of course with the usual intermediate supply of common water—became perfectly healthy and luxuriant, and have ever since (two years,) remained so.

Dahlias.—Which I have never succeeded well with before, have done beautifully with me since, flowering most abundantly and brilliantly, when watered in this way. In all out of door plants, if mulching is used, only half the quantity of plain water is needed. For plants in pots, I consider it invaluable; and gardeners who wish to raise specimen plants for exhibition, will find this mode of watering them every sixth time with the solution, to produce a perfection of growth not to be surpassed in any other way.—*It.*

GLAZING WITHOUT PUTTY.

MR. EDITOR :—An article copied from Hovey's Magazine appeared in the Florist, in which I stated my belief that the system of glazing without putty, was not "American" as it had been called. This drew forth a reply from a correspondent, who signs himself "Beta, Philadelphia," who doubts the veracity of my statements. I do not at any time consider anonymous contradictory assertions on any subject worth replying to, especially when in a discourteous strain of language, much less do I consider such a writer worthy of notice when he advances nothing to support the fact he endeavors to establish. Now as we have seen nothing to establish the American origin of this method of glazing, save and except the assertion of Mr. Hovey, who seems very desirous of appropriating to himself the merit of originating it; and as no one here, with whom I have conversed on the subject, knows anything or ever heard anything of the houses which he says he built in 1833, and glazed in this way, I think it would very much serve the cause of truth, and also be a proper course of proceeding in the enquiry, if you would through the Florist inform your readers whether any houses have been glazed in this country on the system that you are yourself acquainted with about Philadelphia or elsewhere, and also the dates of their erection. "Beta," who I presume is one of your readers, will also favor us by considering this request also made to him. I have made a similar request to Mr. Hovey, requesting also to know where the houses he speaks of having built in 1833 can be seen, as they will be now in the prime of life, and will afford an excellent illustration of this excellent system.

I do not claim to have anything to do with the origin of the sys-

tem, though I have of late years adopted it somewhat extensively ; but I have always believed it to be of Scottish origin, and not only so, but to having been brought to this country, and practically applied to horticultural buildings of any extent, by a Scotchman ; who has I believe been over 20 years in America, and who is at this day one of the best known, and most successful practical men now in the country, and this I know is saying a good deal. But as we are all liable to be mistaken in our beliefs, I may possibly be wrong as well as my friend. To warrant us however in changing our belief I trust we will have something more substantial than mere doubts and assertions. I should be the last to deprive America of the credit of originating anything new in horticulture, and should it prove to be her due, I will be the first to accord my humble meed of praise. I shall write you more fully on the subject after your replies.

Respectfully yours, R. B. LEUCHARS.

Quincy, July 18, 1853.

The only instance we know in this neighbourhood of the above mentioned glazing is the orchid-house at Mr. Cope's, Springbrook, in this county. Where it originated, we do not know, but we don't think that the constructors of that house got their ideas from Mr. Hovey. Probably "Beta" if he be among our readers will let us hear what he knows on the subject. We heard subsequently of another house, near Waterbury, Ct., if our memory serves, which was built in the same way. Our impression with regard to Mr. Cope's house is, that it was an experiment of the carpenter's.—Ed.

THE CINCINNATI STRAWBERRY THEORY.

My experiments demonstrating the fallacy of the Cincinnati Strawberry theory have called into existence considerable opposition from its supporters. My time is too limited to reply to each objector on his own ground. I intended to leave my experiments before the public, to let them stand on their own merits, and let my opponents have the woman's privilege—the last word. But they seem never to have done. As they go along with it, they encumber themselves with all kinds of extraneous ideas until the original idea they started with is scarcely to be found. In order to settle this ques-

tion, I have decided to take it up again, explain their theory in all fairness, the evidence on which they build, and the benefits they claim for it; when I will show its fallacy both in science and practice, and the futility of the arguments that have been made against my objections.

But it seems, Mr. Editor, I have to qualify myself to argue the point. They object to my nationality. "An European, and a gardener too, what *can* you know?" Gentleman, I plead guilty; but I plead in mitigation of sentence that I was not aware of the importance until you discovered it—still I am willing to give you every chance of a verdict in the line of argument you have chosen. I am ignorant of the exact spot whereon I was born. I believe it was somewhere in England. I do not know in what county, but will try and discover. I have in my veins Gælic, Celtic, and Saxon blood, but do not know which preponderates. Sometimes I believe I am like Plunket's client who "could not be a traitor to his country, because he had no country to sell." Then as to my knowledge. That is a delicate subject. One can hardly find brass enough to speak well of himself. Cato Censorious says there are times when a man may do so. With such victorious authority may I not attempt it? Let me say then that it *may* be possible to be an European and a gardener, and yet have knowledge enough to put a death blow to a fallacious theory.

What is that theory? In a large quantity of seedlings five varieties are produced: Namely, *Pistillates*, *Hermaphrodites*, &c., each variety remaining true to its character through any circumstances; that use was first made of this theory in the west, to produce fruit from Strawberry plants that otherwise would have been barren, by placing staminate plants in the vicinity of pistillate ones, and that fruit raised from such plants, were finer than if they had been Hermaphrodites and in greater profusion.

Now, I am in no way disposed to detract from the real merits of our friends in the west. It has not yet been proved that a pistillate flower will produce fruit without impregnation with the male property. The only thing I have seen in print in relation to the subject, is by my learned friend "W. D." of West Chester, who has ably shown by Botanical analysis in the July No. of the Farm Journal, that such a circumstance is possible.

Until that has been proved—and practice is certainly against it so far as the strawberry is concerned. The Cincinnatians have done some service. It is in the permanency of the sexual characters of their varieties that they fall into error.

They believe in their permanency chiefly because they have had them under their eyes for years, and after the most careful observation, could trace

no change in them. Now this is very strong evidence. But I have evidence that can overrule it. They can ask "cannot a man believe his own eyes? We have watched them closely—not once, but a thousand times—not only individually, but in committees, in societies, in great numbers—not in one locality, or one state, or one situation, but in many. And if they do ever vary, should we not have seen them? and, if others observed it, should not we have heard of it?" But Botanical science is not satisfied with *negative* evidence, she modestly enquires why are those characters so permanent? and the reply is that permanence of character is universal—one of nature's immutable laws. That a character given to variety at its birth, remains with it through all circumstances. That we may as well talk of changing the sex of the human family, or of any animal, as to expect a plant, pistillate at its birth, ever to produce flowers with perfect fairness. Now, I believe, I have given their arguments fairly. It will be seen that they rest first on *negative* evidence, which I shall oppose with *positive* and *direct*; and secondly by a *supposed analogy*, which I shall show to have *no real* foundation, and to which I shall oppose acknowledged principles of Botanical science.

Many have seen beds of strawberries change sexes, and be of different sexes when only one was originally alone planted. They have had every care taken of them to prevent mixture; but their owners are told, that "strangers must have got in somehow and kicked the rightful owners out of the bed," "Seedlings may have come up there," anything but a change. "My strawberries don't change, *therefore*, yours cannot." This logic don't convince the owner of the mixed bed; and yet how is he to prove the logic of the other unsound? Very easily—mark *one* plant, note its character, take runners from *it* alone, use the greatest care, leave no doubt for mistake, and then when in a dozen such, you do as I have done, get seven of one kind and five of another, follow the Cincinnati fashion, and "Give your opinion to the *world*," If they allude to the "sexes of animals, which when once the same always the same," ask them to undertake the absurdity of taking a *runner* from some *animal*, and make it *another individual* animal; then to place it in totally different circumstances to the *original animal*, as you do the strawberry, and see whether it will *then* change or not, before they say much about it; and if they see the impossible absurdity of this, then tell them their "analogy" cannot be *applied*.

I have alluded *briefly* in the last paragraph to my *direct* and positive evidence of the change, and in matters of fact brevity is always best. I will refer the reader again to it, and now proceed to show that it is *consistent* with Botanical science, and consequently, that any other theory is *not*.

We will begin with the study of a plant. It is composed of two distinct systems—the *vascular* and the *woody*. Those parts of a plant which have most reference to the former, have a *tendency* to change by cultivation. Every part of a plant belongs to one or the other of these systems; and each part as it is successively developed, is but a *higher stage* of the same thing. In reference to our subject we have to do with *stamens*. They belong to the vascular division, and are but a higher stage of the *petal*, while these again, are but highly developed *sepals*; and the latter but perfected *bracts* or *leaves*. All, or any one of these, belonging to that system, are liable to change by culture and circumstance. Take *leaves* to begin with. If any gentleman will take the trouble of going into a wood of *white Oak* he will find that the leaves are merely *lobed*, often nearly entire, and resembling very much the leaves of the British oak on the branches nearest the *base* of the tree, while those on the *top* are very deeply *sinuated*, often nearly *lacinate*. The most plausible inference at once is, that the absence of much light to the lower branches, has made the difference. On looking for a tree that has stood for years in the full light by itself, we find our pathesis correct, as *there all* the leaves are *uniform*. This shows how the forms of leaves are influenced by *light*.

Other principles of cultivation have a similar influence, soil will alter the smoothness or downiness of leaves, as well as their color and form. By taking off a part of any plant with these peculiarities, and making of it a distinct individual, we give it a greater power to perpetuate itself. The variegated leaved shoots, that sometimes come on *Evonymus japonicus*, if taken off retain their peculiarity through many different circumstances; but if they are planted in a *wet soil and shady situation*, they will *very frequently* return to their original green state; going a long way to prove that a dry soil and exposed situation first caused the change, and that when taken off, they would retain that change in any circumstances, not opposed to the original cause—when that occurred they assumed their old form. I take this example because it has probably been observed by many, and as *stamens* are subject to the same laws, being in fact the same thing more highly developed, it will be apparent that they too *must also* change their form and character to suit the circumstances that govern them. Let us get amongst the *stamens*—take the *Catalpa*. The old Botanists placed this plant in their class *Didynamia*, which requires *four* *stamens*—their specimens from Virginia warranted them in so doing. But the English plants will never produce but *two*, so their Botanists placed it in *Diandria*—so in this district, where the *catalpa* is so far removed from its most natural localities, it very rarely perfects all of its *stamens*. On the other hand

take the *melon*. In England the climate not being perfectly adapted to its perfection, the plants are entirely *monœcious*. Here, where they grow in rich soil, out of doors, are quite at home, they are *Polygamous*, bearing frequently perfect Hermaphrodite flowers. If we attempt to *force* them it is quite another affair; their flowers being then pistillate. In this instance, I have shown how by a perfect conjunction of circumstances, a plant which in other circumstances, would produce but pistillate flowers, produces hermaphrodite.

I fear I trespass too long on your valuable space, or I should like to continue these notes, I will conclude with one more instance of how stamens may be produced or rendered abortive by cultivation. Every Botanist knows that the *Brugmansia* or *Datura* is a Pentandrous or five stamined plant. The *B. Knightii* is a double one, or the flower has *two corollas*, with the five stamens and one pistil perfect. But suffer it, after having been well grown, to become starved and stunted, and it will become *single* but with ten *stamens* instead of five—we *change* the petals into *stamens* by *cultivation*.

Who now believes in the permanency of stamens in a strawberry flower or otherwise? Let him take a pistillate plant, propagate from it, keep them in pots of poor soil, let them come forward naturally in a cool, shady place, on a north aspect where no direct sun can ever reach them, and if ten to one who try the experiment fairly do not get Hermaphrodite flowers from these plants, I have done.

Some of the advocates of the theory offer me ten thousand dollars if I can prove them wrong. If they will please to convince themselves in the manner I have detailed, they can forward me a check for the amount on any of our city banks, or of New York.

THOMAS MEEHAN.

CALENDAR OF OPERATIONS.

(Continued from last No.)

GREEN HOUSE.

Cultivators must begin to turn their attention to next year's stock. A commencement is generally made with the *Pelargonium*. In England the first thing in order is to prepare a hot bed, to obtain bottom heat. Here it is perfectly unnecessary. A few trials of the thermometer in August or September, will show the earth at that time to be several degrees warmer than the atmosphere, which is all that is required of temperature to successful propagation. A bed of sandy soil made up out of doors, with a frame

over it, in order to regulate the moisture, and to enable us to shade, is perfection. Moles and ground mice are apt to give trouble—means should be taken to prevent their ingress. In cutting back the *Pelargonium* leave three or four good eyes to every shoot, if it be desirable to form it into a fine specimen next season. After they are cut down, set them in full sun, and give little water till they begin to shoot.

Chrysanthemums are much improved by waterings of guano water about once a week from this time till they begin to flower.

This is the best time to propagate *Cactaceous* plants and *succulents* generally. Many prefer to graft the former—generally on the *Cerei* or (though seldom seen in America) the *Pereskia Bleo*. In my opinion they form very unnatural looking objects. The *Epiphyllum* however, does not look so bad on the *Pereskia*. I prefer all these things on their own roots. Cuttings or offsets placed on a box of sand, or just beneath the surface, exposed to the full sun, with very occasional waterings, strike root readily.

Those who did not sow their *Chinese Primroses* in the spring, should lose no time now, or their houses will be sadly behind their neighbors in interest the forthcoming winter. All plants got on for *winter flowering*, should also continue to have shifts as often as their pots become filled with roots.

Ancient calendar writers would have much more to say this month about “attending to watering,” “syringing,” “destruction of insects,” all of which subjects I expect my readers perfectly understand. It is not our object to mark out routine duties, so much as to record progressive facts.

VEGETABLE GARDEN.

Don't earth up *Celery* till it has grown stout and sturdy. To aid this, give copious waterings of soap suds or manure water; whenever opportunity serves. Plant out *Endive* fifteen inches apart in very rich loam. They also are very grateful for occasional manure waterings. The greatest demand by the family will be for the curled variety. Give *Brocoli* and *Cabbage* strong soap suds too, you may “see them grow” after it. I believe you sowed *Ruta Bagas* last month, and are now ready for the *Flat Top Dutch*, or *Red strap leaved*. The cooks prefer this kind. They are frequently sown after a crop of early potatoes. It is rather opposed to a sound system of rotation of crop; but they generally do well this way, and it is therefore followed. If the fly prove troublesome to you, see if soap water will prove troublesome to them.

Still make another sowing of *Corn*, *Peas*, and *dwarf Beans*. If they come in before frost they will add much to the credit of the department. *Radishes* and *Lettuce* will be sought after in the fall—look out a rich, cool, piece of ground for the prospect.

T. J.

THE POLYTECHNIC COLLEGE OF THE STATE OF PENNSYLVANIA.

It is gratifying to be able to record any good work done by our rulers: especially when they do comparatively so little. At the session of the State Legislature just passed, the Polytechnic College of the State of Pennsylvania was chartered. When we consider the vast importance of the Agricultural, Mining, and Manufacturing interests of our country, we feel how great the necessity is of schools for the instruction of our youth in Practical Chemistry, Engineering, and Mechanics. The circular of the Board of Trustees we give below.

This College, incorporated by the Legislature, at its recent session, is designed to include in its organization, a COLLEGE of MINES, of AGRICULTURE, of ARTS, and of MANUFACTURES; and to afford those destined for these important branches of industry, a thorough scientific education. The application of Science to the Arts, is daily rendering them more powerful sources of National progress, and demanding increased intelligence in those engaged in their prosecution. The Civil and the Mining Engineer, the Architect, the Manufacturer of Chemicals, of Sugar, and of Glass; those engaged, or interested in the productions of the Plough, the Anvil, the Furnace and the Loom; all these have, under the stimulus of modern science, and of modern competition, assumed a new and nobler position; and hence their proper education has become an object of deep public moment, and one closely affecting national prosperity.

These facts, first recognized on the Continent of Europe, led there to the establishment of schools of Mines, and of Arts, which have not only tended locally to the perfection of Art, but have become the resort of students from all parts of the civilized world. The value and necessity of these Schools, is attested by the constant demand for their students, and the many responsible positions held by them, in this and in other countries. The congregated Industry of all Nations, exhibited in the grandest temple ever dedicated to the Arts, exemplified the superiority of the educated artist and workman, and already reckons among its happiest results, the founding in Great Britain, under the most distinguished patronage, of the "Industrial College of Arts and Manufactures."

Animated by the general spirit of industrial progress, the Trustees of the

Polytechnic College hold that the time has arrived for the establishment in this country, of an institution which shall yield to our youth the advantages heretofore obtainable only in foreign lands, and which shall respond to the demands of the great interests of Production and Construction.

Such an institution is especially required in America, where, beyond example, demand for labor and capital exceeds supply, and where, consequently, prodigal expenditure in the development of our yet untold commercial, agricultural, and mineral resources, is most disastrous. In the department of mining and metallurgy alone, millions of dollars have been squandered, and years irretrievably lost in vexatious delay, through ignorance of scientific and economical methods of working.

The State of Pennsylvania has already become the centre of many of the most important branches of industry, and her metropolis, Philadelphia,—contiguous to the mines, and the seat of extensive and varied manufactures,—owes it to her literary and scientific reputation, to provide the most ample means for education in the arts.

The Trustees have not received, nor have they asked aid from the State. They rely upon the prompt, liberal, and cordial co-operation of every friend of the measure, not only in Pennsylvania, but throughout the country.

They confidently anticipate the opening of the College with a full faculty, and copious means of illustration, and of practice, in the month of September next.

The plan of organization will comprise the following Departments.

1. MATHEMATICS AND CIVIL ENGINEERING.
2. MECHANICAL PHILOSOPHY, AND THE PRINCIPLES OF MACHINES.
3. METALLURGY, AND INDUSTRIAL, AGRICULTURAL, AND ANALYTICAL CHEMISTRY.
4. MINING ENGINEERING, MINERALOGY, AND GEOLOGY.

A well supplied analytical laboratory, sections and models of mines and machinery, a geological and mineralogical cabinet, field operations, and architectural and mechanical drawing, will afford ample facilities for thorough and practical instruction. Students will be enabled to pursue one or more studies for a year, term, or less period, and after examination, will be granted Certificates of capacity accordingly. Candidates for Degrees will be examined on all the branches, but may pursue the studies a longer or shorter time, according to industry and ability.

Communications should be addressed to JOHN MCINTYRE, Esq., Secre-

ry to the Board of Trustees of the Polytechnic College of the State of Pennsylvania, Walnut Street, above Sixth, Philadelphia.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this Society was held on Tuesday evening, July 19th, in the Chinese Saloon, Gen. Patterson, president, in the chair. The exhibitions of plants was unexpectedly large for midsummer; each collection contained some possessing interest, which it might be well to notice.—Among those brought by the President's gardener, were a fine large plant of *Plumeria rosea*, which the General sent home from Mexico, and has now flowered for the first time. *Tabernaemontana coronaria*, in fine flower.—*Columnnea Schiediana*, and a number of air plants. Among Robert Buist's were new plants, and shown on this occasion for the first time—*Cyrtanthus magnificus*, *Lycaste tetragona*, *Achimenes Margaretta*, *Fuchsias Orion*, *Gem of the season*; *Alpha* and *resplendens*, and *Gloxinia Victoria Regina*. F. Lennig's gardener, exhibited two very fine plants—*Gardenia Stanleyana*, in full flower, and *Plumeria rosea*. Caleb Cope's had three new species, exhibited for the first time—*Justicia bicolor*, *Promœcea stapeloides*, an orchid, and Hovey's *globe amaranthus*, a fine specimen of *Olerodendron Koempferii*, *Allamanda nereifolia*, &c. W. W. Keen's contained a new plant, *Hoya campanulata*, very pretty, and seen for the first time—*Lophospermum Hendersonii*, *Fuchsias*, &c. James Dundas' gardener presented handsome *Fuchsias*, *Gloxinias*, and a most beautiful air plant, the *Cattleya Mossia*. The fruit table was laden with tempting specimens of peaches, very large—called Admirable, and a seedling tree in fruit, growing in a 14 inch pot, also grapes of varieties, Black Hamburg, St. Peter's, White Frontignac, Tokay, and Purple Damask, from Mr. Cope's grounds. From Eden Hall, were Black Hamburg and White Muscat grapes. Very large and luscious Moorpark Apricots, by Thomas Robins, Wm. V. Pettit and Wm. Johns. H. Pratt McKean, large fine gooseberries, called Cook's White Eagle, and Farrow's Roaring Lion. Isaac B. Baxter had seedling Apricots, Plums, the Royal Hative and Jefferson; and 3 kinds of gooseberries. Mr. Buist, Breda Apricot; Pears, Bloodgood, Windsor, Madeline, English and French Jargonelle; Currants, Black grape, Black Naples and late black kinds. Alex. Parker seedling Apricots. H. W. S. Cleveland, St. Michael Figs, a choice dark variety. Wm. Johns, green Figs, and John Perkins, seven varieties of apples.

Mr. Cope's gardener exhibited a table of fine esculents.

Premiums awarded were by the Committee on Plants and Flowers. *Plants in Pots*—For the best twelve to Thos. Fairley, foreman to Robert Buist; for the second best to Thos. Meehan, gardener to C. Cope; for the third best to Wm. Grassie, gardener to W. W. Keen. *Plant in Pot*—For the best specimen, *Gardneria Stanleyana*, to John Pollock, gardener to F. Lennig. *Indigenous Plants*—For the best to Alex. Parker. Plants shown for the first time—A premium of \$3 for *Hoya campanulata*, to Wm. Grassie, gardener to W. W. Keen; one of a dollar for *Justicia bicolor* and *Gomphrena Hoveyii*, to Thos. Meehan, gardener to C. Cope, and one dollar to Thos. Fairley, foreman to R. Buist; for a collection of *Achimenes*, *Gloxinias*, and a *Cyrtanthus*. *Bouquet design*—For the best to Isaac Collins, gardener to General Patterson. *Basket*—For the best to Thos. Meehan; for the best of indigenous flowers to the same.

Special premiums—Two dollars to James Bisset, gardener to Jas. Dundas, for *Cattleya Mossia*, a fine specimen; and \$3 to Isaac Collins, gardener to Gen. Patterson, for a large collection of plants, including a beautiful specimen of *Plumeria rosea*, *Orchids*, and other green and hot house plants.

By the Fruit Committee—*Grapes*—For the best black variety, Black Hamburg, to Thos. Meehan, gardener to C. Cope; for the second best to A. J. Smith, gardener at Eden Hall. For the best of a white variety—White Frontignac to A. J. Smith; for the second best, Golden Chasselas, to Thos. Meehan. *Apricots*—For the best to Thos. Robins, for Moorpark; for the second best to Wm. V. Pettit, for the same kind. *Plums*—For the best, the Imperial Gage, to Isaac B. Baxter; for the second best, Mirabelle, to A. Parker. *Figs*—For the best to H. W. S. Cleveland, for St. Michaels; for the second best to Wm. Johns. *Gooseberries*—For the best to A. Burnett, gardener to H. Pratt McKean, for Roaring Lion; for the second best, the large green, to Isaac B. Baxter. *Apples*—For the best, the Early Harvest, and for the second best, the Bough, to John Perkins; and special premiums of \$3 for very fine Peaches, and \$2 for a seedling peach tree in fruit, in a pot, to Thos. Meehan.

By the Committee on Vegetables—*Tomatoes*—For the best half peck to James Jones; for the second best to Wm. Johns. For the best display of Vegetables, by a private gardener, to Thos. Meehan, gardener to C. Cope.

Adjourned.

THOMAS P. JAMES, *Rec. Sec.*

FLORAL AND HORTICULTURAL EXHIBITION.

The second annual Floral and Horticultural Exhibition of the Berks County Agricultural Society, was held in the Academy Hall, North Fourth Street, on Friday and Saturday, the 24th and 25th June. The time was exceedingly ill-chosen, being several weeks too late for the most advantageous Floral display, and as many too early for anything like an effective demonstration in the Fruit department. The extreme heat of the weather also operated unfavorably. Yet, with all these drawbacks, the Exhibition was a very handsome affair—the citizens of Reading, and many of our country friends, entering into the competition with all the spirit and animation that characterized their efforts at the former exhibitions of the Association. The attendance, too, was quite numerous—many of the farmers leaving their work at the busiest season to be present. We learn from the Secretary that *twenty-one* new members were added to the Association, making the present number of members 800, and that the receipts for admission amounted to about \$140—a sum sufficient to pay all expenses, and leave a small balance besides to be added to the general fund. We annex the reports of the various Committees appointed to examine the articles presented, and award premiums to the most deserving:

AWARD OF PREMIUMS.

FRUIT.—Your Committee would respectfully report premiums as follows, to wit:

For Cherries—Black Tartarean, Joseph Wright, 1st premium,	\$1 00
Bigareau, Solomon Kirby, 2d premium,	50
Special premium to Samuel Bertolet, for largest Cherries—less quantity than a quart.	
Best variety, William D. Hains,	50

There were very fine specimens of English Morello, by Andrew Taylor and John Deininger, which came too late for competition.

No premiums were awarded for Strawberries and Raspberries. A dish of Strawberries was exhibited by Mr. Wentzel. Some fine specimens of Raspberries of the Col. Wilder and Orange varieties, by Charles Kessler, and a fine plate of red Antwerp, by Jonathan Deininger. Also, Wild Raspberries, by Deborah Wright;—a plate of Service Berries, by Deborah Wright. Oranges, by Mr. John Kurtz.

Strawberries in Spirits, Hovey's Seedling, Pine Apple, and White, by Dr. P. G. Bertolet.

Plate of Apples, by Wm. H. Haines.

Lemons, Mrs. C. Ritter, premium, 50

Currants—Charles Kessler, White; Dutch, and Red, very fine; also, by Henry Kessler, and Mr. Knop.

Gooseberries—very fine specimens.

Solomon Sherer, 1st premium, \$1 00

Michael Knop, 2d do 50

Mrs. Deborah Wright, best variety, 50

Very large and fine specimens were exhibited by Capt. Griffith, and Col. Kendall.

The Committee on Vegetables, in pursuance of the duties detailed to them, beg most respectfully to report, that they have made the following awards, according to the schedule laid before them, viz :

Jesse Wentzell, Exeter, best Red Beets, \$1 00

do do do Salad, 50

do do do Beans, 1 00

do do do Peas, 1 00

Jos. Wright, Maiden creek, best Potatoes, 1 00

do do 2nd best Beets, 50

Henry Gring, Cumru, 2nd best Potatoes, 50

Jacob L. Greiner, 4 best Potatoes, but being less than half a peck required were not entitled to a premium.

Jesse Wentzel, Exeter, best dozen Tomatoes, 1 00

Jos. Wright, Maiden creek, best Onions, 1 00

Henry Kessler, Reading, best 3 heads of Cabbage, 50

Jesse Wentzel, Exeter, best display of Vegetables, 2 00

Michael Hauser, 2d best display of Vegetables, 1 00

They also noticed with much pleasure, some fine Potatoes and Beets, exhibited by Dr. Bertollett, of Oley, and Mr. Hauser, of Reading, but not being the quantity required, could not compete for premiums.

The Committee appointed to report on "Roses and Green House Plants in Pots," have the honor to state, that the premium for the best exhibition of *Green House Plants in Pots*, consisting as required, of "at least twelve dissimilar varieties, comprising not less than eight genera, labelled," is awarded to Capt. D. A. Griffith, he being the only one who complied with the specified regulations.

In regard to Roses in Pots, no exhibitor furnished the number required for a premium; although several beautiful varieties were sent by Mrs. Eliza Kessler, Mrs. Mary Davis, &c.

The Committee feel bound to make special mention of a large and splen-

did variety of Verbenas, Calceolarias, Petunia, Letospeira, &c., &c., exhibited by Mrs. Eliza Kessler, and Mr. Michael Hauser. It cannot be expected that all the plants (of which there were so many fine specimens,) should be noticed individually; and it is probable, that during the examination in the crowded Hall, the names of some of the numerous contributors have been omitted unintentionally. We would therefore merely state that Mrs. John Kutz, Mrs. J. 'Arnold, Mrs. H. Nagle, (a beautiful Passion vine, &c.) Mrs. R. F. Brown, (among other fine plants a rare *variegated* Calceolaria, and a California Goldiana,) Mrs. Albright, Mrs. F. S. Bickley, Mrs. John Henry, Mrs. Oakeley, Mrs. Snyder, Mrs. M. Miller, Mrs. Beckhardt, J. Gorgas, Mrs. Sell, Mrs. Foecht, Mrs. Rhoads, Mrs. Edes, Mrs. McKeever, Mrs. McDonald, Mrs. Siegel, D. Rhein, Peter Homan, (an Agave Americana, 21 years old,) Mrs. Dickenson, Mrs. Weitzel, Mrs. Mary Davis, Mrs. Kessler, Mr. Hauser, and perhaps others, presented for exhibition a very handsome and large variety of green-house pot flowers, among which may be enumerated white, red, and variegated Oleanders, Pomegranates, Verbenas, Petunæ, Creeping Cereus, Aloes, Cactus of very many varieties, Pinks, Calceolarias, Hydrangeas, Fuchsias of many kinds. Also, a number of very rare plants, unlabeled, together with a general assortment of flowers now in bloom, all of them of a very superior character, as might be supposed from the names of the contributors.

The Committee regret that the rule requiring the plants to be labeled, was not more generally observed; the neglect thereof diminishing somewhat the gratification of the visitors. With the wish that the next floral exhibition may be held somewhat earlier in the season, and that each one will surpass in beauty, excellence, and variety, its preceding one, we close our report,

Your Committee on *Indigenous Plants*, regard with lively pleasure the increasing interest taken in our county in the study of the "*amiable science*" Botany. They understand that there would have been a stronger competition for the premiums offered by your society, had not the intense heat and dryness of the previous week materially marred our flora.

The first premium we consider fully due to Mr. Charles A. Deininger, whose beautiful and tastefully arranged vase of rare native flowers, elicited a general expression of admiration. It contained 20 species, representing 18 genera.

Your Committee sincerely regret their inability to award your second premium to Miss E. B. Griscom, for her vase of "Never Sink" flowers, arranged with so much neatness and taste. They were deposited too late to come within the rules of the exhibition.

The Committee to whom was delegated the delicate task to decide the

merits of the cut flowers submitted for exhibition, approached the subject with a knowledge of the deep responsibility resting upon them; the fact of the great variety of flowers, rendering a decision more difficult on account of the different merits presented in various aspects, comprising great varieties, rare combinations, and excellent taste. The Committee strove to attain that impartiality so necessary to a proper discharge of their duties, and submit the following premiums as their award and decision :

Roses.

Best display of Roses, No. 20, Miss A. Arnold, Premium,	\$1 00
Second best, do No. 72, Chas. Kessler,	50

Designs.

Best design of flowers, in Rustic Basket, including Calystegia pubescens, No. 74, Mrs. M. E. R. Keim, Lower Heidelberg,	\$2 00
Second best design on a Fan, No. 152, Miss Griscom,	1 00
Third best design, No. 6, Capt. D. A. Griffith,	75

Flowers in a Basket.

Best display in a Basket, No. 20, Mrs. Deborah Wright, Maiden-creek,	\$1 00
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Bouquets.

Best Round Bouquet, No. 102, Mrs. H. B. Connard,	\$1 00
Second best, do No. 62, Mrs. D. M'Knight,	50
Best Flat, do No. 28, Mrs. Brooke,	1 00
Second best do No. 128, Miss Julia Shearer,	50

Pyramid.

Best Pyramid, No. 108, very choice, Christian Shutter,	\$2 00
The Committee submit the following as being worthy of honorable mention :	

Dr. P. G. Bertolett, No. 155, design in leaves, commemorative of A. J. Downing.

Miss Boyer, No. 138, Pinks.

Henry Kessler, No. 1, Verbenas and choice flowers.

Elmira Stetler, No. 157, Cactus, large and rich.

Miss Mary M. Mayer, No. 91, 14 varieties of Verbenas.

Pupils of the North-West Ward Female Grammar School, No. 149.

Mrs. G. A. Nicolls, Nos. 37 and 38.

Miss Clara Boas, No. 129.

Michael Hauser, No. 53.

Mrs. Levan, No. 148, Rhododendron.

Henry S. Bickley, No. 164.
Mrs. John Kutz, No. 134.
Mary Davis, No. 98.
Mrs. S. Young, No. 41.
Charles W. Keim, Basket of Flowers.
Mrs. John Ritter, No. 154.
Lewis Briner, No. 6.
John Moyer, Night Blooming Cereus, (cut.)
Reuben F. Brown, No. 47, Pyramid.
Miss Shearer, No. 129.

THE GENESSEE VALLEY HORTICULTURAL SOCIETY held its first meeting for this season on the 21st of June. The display was a very fine one. Messrs. A. Frost & Co., Ellwanger & Barry, and J. A. Eastman, Esq., and others, contributed numerous varieties of Roses. Greenhouse plants and Bouquets were also very good. We had a report sent us by a subscriber in Rochester, but we have not room for it.

We saw a plant of the new variegated climber, *Cissus discolor*, in the greenhouse of J. F. Knorr, Esq., West Philadelphia. The colors of the large heart-shaped leaves are more beautiful than those of any foliage we ever saw, being a reddish purple, deep green and ashy white. In the course of this year we will give a figure of the plant.

PERPETUAL FRUITING STRAWBERRIES.

Last fall I potted some Strawberry plants for early forcing, these ripened a light crop during March and April, and were then planted out; they have continued bearing more or less ever since. At the present time there are fruit in all stages from the opening blossom to the ripe truss. I do not mention this as anything new, it being a common practice with gardeners to gather a second crop from forced plants when treated in this manner. It occurred to me, however, that this "Crescent seedling" habit might not be generally known, and whether the climate of New Orleans where this variety originated might not afford a natural treatment similar to what these were artificially subjected to, and if so, would not any strawberry thus become in some measure a "perpetual."

Baltimore, July 18, 1853.

W.

The Flore des Serres et des Jardins de l'Europe. It is of the greatest importance to the botanist and to cultivators generally that new plants should be figured, as without the plant itself or a figure no idea can be formed from a description. In Europe there are several works which produce representations of the new plants which flower there. Curtis's Magazine, and Paxton's Magazine of Botany keep us well informed of the varieties of Kew and other English gardens—Turner's Florist presents us with the best hybrids of several favorite genera—the figures of Vilmoren, Mielliez and others in Paris do the same in that quarter. In Ghent M. Louis Van Houtte, the celebrated Belgian Horticulturist publishes his *Flore des Serres*—a monthly containing eight or nine plates of the rarest plants either of recent introduction or of hybrids raised in England or the continent. The execution of these plates is very much superior to those of any other magazine we have seen, our readers can see specimens in our own plates which were procured from the same establishment. We are often gratified at seeing figured most beautifully some of the beautiful inhabitants of our own forest and swamps which in Europe are considered of some worth. In the last volume we found a plate of *Pyxidanthera barbulata*, which may be had here in the spring, at the corner of Market and Eighth streets, nicely done up in a rag, for sixpence, yet the sending of that little plant is thus announced. "This is a plant which a rare good fortune has enabled Sir Wm. Hooker to publish the excellent figure here reproduced. Specimens gathered in the pine barrens of New Jersey by "M. Evant of Radnor, (Delaware)," arrived last May in Kew gardens, as fresh, and as well flowered as if they had just been gathered. Still another feat of that great magician steam, still another service of that ingenious system of portable glasses which is called the Wardian system!" Our friend of Delaware County has thus performed a service to the botanists of the other side, which he did not anticipate when he boxed up the little *Diapensia* in a Wardian case. The contributors to this work are among the most celebrated botanists; besides the Editor Dr. Planchon, we have the names of Blume, Brogniart, De Caisne, De Candolle and others. Mr. G. G. Sheppard of New York is Agent for the work in the United States.

ERATUM.—The eight pages of signature 30 in this number are wrongly numbered.



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Philadelphia, September, 1853.

[No. 9.

RHODODENDRON EDGORTHII.

ERICACEÆ § RHODODENDREÆ.—DECANDRIA-MONOGYNIA.

CHARACT. GENER.—*Calyx* 5 partitus, *Corolla* infundi-buliformis rarius campanulata aut rotata, nunc regulari nunc plus minus irregularis semper 5-loba. *Stam.* 10 (rarius abortiv. 5-9,) corollæ non adnata, ante et inter lobos sita, sepius declinata, exserta. *Antheræ* poris 2 terminalibus dehiscentes. *Capsula*-5 locularis, 5-valvis, aut 10-locul, 10-valvis septicidodehiscent. *Semina* axi colummari angulato adnata compresso, scobiformia subulata.—Frutices rarius arbores, folia *sempervirentia petiolata integerrima*. Flores in *corymbis terminales dispositi*. *Alabastra floralia squamosa*. *Corollæ conspicuæ albæ aut flavæ* DC.

CHARACT. SPECIF.—“Frutex sæpe epiphytus, ramulis petiolis pedunculis capsulis foliisque subtus dense ferrugineo-villoso-tomentosis, foliis sublonge petiolatis elliptico-ovatis acutis v. acuminatis subcoriaceis rugoso-reticulatis basi obtusis supra nitidis marginibus recurvis, pedunculis 2-3 terminalibus v. ab innovationibus lateralibus, floribus speciosis albis, calycis ampli 5-partiti lobis foliaceis oblongo-ovatis inæqualibus lanuginosis ciliatis, corollæ tubo breviusculo late campanulato, limbi maximi lobis rotundatis venosis orenato-undulatis, staminibus 10 exsertis, filamentis inferne villosis, antheris elongatis, ovario dense tomentoso 5-loculari, stylo gracili basi lanuginoso, capsula oblongo-cylindræa recta obtusa valvis lignosis.” HOOK. fil.

Rhododendron Edgeworthii, HOOK. fil. Rhod. of the Sikk.-Himal. ser. III. t. 21. (Cum icone hic imitata).

For size of flower and beauty of form, this magnificent species can only be worthily compared to the *Rhododendron Dalhousiæ*, which it resembles also in its epiphytal vegetation. It is, like the former, a shrub whose slender branches balance themselves on the branches of trees (particularly those of Pines) in the rocky ravines of the higher valleys of the Sikkim Himalaya, between 7-9000 feet (English) above the sea. In sudden storms, when avalanches of rocks carry to the bottom of the ravines both the tree and the parasitic vegetation which decorates them, the flexible shrub often

escapes destruction and taking root on the very ruins, seem to soften the misfortune, by opposing to the brute force of nature the reproductive power and the fecundity of life. It is in such situations that Dr. Hooker has been able to gather without much trouble specimens of the plant, naturally little accessible in its most usual station, on the branches of large trees. The fact that it grows equally well on rocks will interest horticulturists, by proving beforehand the possibility of its culture in circumstances little different from those in which the terrestrial species are placed. Only it must be supposed that this species, like *R. Dalhousiæ*, will require more heat and atmospheric moisture than do the species of the orangery such as *arboreum*, *campanulatum* and others.

J. E. PRANCHON,

In the "Flore des Serres."

HISTORY AND CULTIVATION.

When Linnæus first borrowed the Rose to describe the beauties of this family, he little dreamt of the honor future discoveries would pour out on his selection. *Rhododendron*, from the Greek *Rhodos* a rose, and *dendron* a tree, if any way descriptive of the beauties of the half dozen species known to Linnæus, must be fully illustrative of the almost numberless varieties that are now known to exist.

One hundred and twenty years ago, our own *R. maximum* alone adorned British collections. Twenty years later the *R. ponticum*, introduced from Spain, gave a fresh interest to the tribe, and since that time, new forms appear annually in something like geometrical proportion. Over three dozen varieties of the latter are already enumerated; and up to 1838 nearly the same number of distinct species had been introduced. Since that date the hazardous and romantic excursions of Dr. Hooker among the Himalayas, and other parts of Asia, have brought to light many secret treasures. Still, unlike some of our modern fruit catalogues, the list never grows wearisome. We can feast on this floral banquet much longer yet, without danger of satiety. In the first form of *R. maximum*, we had rare and simple beauty, flowering in the summer months.

Then in the next following form of *R. ponticum*, we had not perhaps such equal grandeur of inflorescence, but greater variety, and the superior advantage of early spring flowering. Later introductions, such as *R. dauricum*, &c. kept up the interest without adding anything to its previous fame, till a totally new class made its appearance from Nepal in 1820, or thereabouts. This class, the *R. arboreum*, more like our *R. maximum* in habit, form, and appearance than any other, but considerably superior to it in the gorgeous splendor of its flowers, seemed destined to throw it far into the shade. Fortunately it did not prove sufficiently hardy to come into competition with it, and hence arose our hardy and tender classes, each indispensable in its own sphere.

Although occasional novelties were introduced, nothing of much interest occurred in the history of the *Rhododendron* till 1847, when its admirers were thrown into astonishment by the announcement that a *yellow* variety had been discovered in Java, which possessed besides the property of blossoming at any season of the year. So different is the appearance of this species that Dr. Blume, a celebrated botanist and describer of Japanese plants, made of it a distinct genus, under the name of *Vireya javanica*. So far the *R. javanicum* stands alone in its beauty. Two forms of it as yet only exist in cultivation; one with orange red, the other with yellow flowers. Closely following this, came the Epiphytal kinds discovered by Mr. Hugh Low in Borneo. A *Rhododendron*, growing on the trunks and branches of trees in warm and damp forests, exactly in the same manner as an air, or *orchideous* plant, created more excitement in the floricultural world, than the discovery of any other plant, the *Victoria regia* perhaps alone excepted. This prepared the way for the future discoveries of Dr. Hooker. All who have seen his beautiful engravings of the *Rhododendrons* of the Sikkim Himalayas, can bear testimony to their rare and exquisite beauty.

Glancing again at their history, we perceive that it gives us four classes, each requiring separate treatment in their cultivation. One represented by *maximum*, another by *ponticum*, a third by *Javanicum*, and the fourth *Epiphytal* kinds.

The first division claims our especial attention as Americans. Glass houses for the protection of tender plants are in the minority so far; our first object must necessarily be the decoration of our ground.

R. maximum itself is one of the best adapted to open air culture. It grows wild in many parts of Pennsylvania in rocky, shady, mountainous situations. It is probably hardy in such situations in any part of the Union. There are several varieties, and many more might be raised from seed. The writer once saw them of every grade of color, from white to deep pink, in the old garden of the celebrated botanist, Humphrey Marshall, at Bradford in this State. When they "sport" so easily from seed, much might be done by artificial aid in hybridization. *R. punctatum* is also perfectly hardy in Philadelphia, magnificent specimens having existed for many years in the old Bartram Garden. *R. catawbiense*, in the same place, is equally hardy, and every year produces a large quantity of its gorgeous flowers, little inferior to *R. arboreum*. These and their varieties, with some of the Siberian species, which are probably as hardy, offer a fine field for rural adornment. It is useless to attempt their culture in exposed sunny situations. In winter time an outburst of sun on their frozen foliage is more detrimental than perhaps the severest frost. If these conditions be complied with, they are not over fastidious in their choice of soils, rejecting entirely only wet ones, or stiff clays. In turfy peat they do amazingly well, yet I have seen splendid specimens in dry gravelly soils, both on gravelly and rocky bottoms.

In the second division we have plants that will not stand our severe winters. They are usually reserved for pot culture. Most of the varieties of *ponticum* have been raised by hybridization. The celebrated Dean of Manchester was peculiarly successful in originating new varieties of them. It is highly probable that by using *R. maximum* as a fertilizer, varieties could be obtained that would prove nearly as hardy as it. The best soil for these is a fibrous, turfy peat, in well drained pots. If this cannot be had they will

do well in half decayed turves from an old pasture, mixed with about a fourth part of well decayed sandy leaf soil. In some cases it is difficult to procure fibrous or turfy soil, and that obliged to be used, is of a loose and fine texture. The plants will thrive very well in such, if kept in small and well drained pots. Whenever repotting is necessary, the new pots should be but little larger than the previous ones. In ordinary cases the *Rhododendron* does not require repotting often. Unless in cases of very rapid growth, they will flower profusely, and do well in the same pots for several years.

Most of the kinds allied to *R. arboreum* are of vigorous growth, frequently growing 20 ft. high—a few of them are exceptions. For soil and general culture, the remarks on the last division will be applicable. When they get large they may be put into large wooden tubs, and stowed away during the winter with the orange trees, and treated in the same manner; a principal item in that treatment being to keep them tolerably dry. They are very apt to be much injured by the thrip and scale. Occasional fumigations with tobacco will stop the ravages of the former, and slight syringings of soft soap dissolved in lime water, will keep them clear of the other.

I have only had the *Javanicum* in cultivation two seasons; but it seems to do very well with much the same treatment as I give the *arboreum*.

There are now many of the new species imported and flourishing in the different horticultural cities. During the past season several very fine ones have been exhibited in flower at our Societies' meetings. I might particularize *R. javanicum* from the collection of Mr. Buist; *R. Gibsonii* from Mr. Cope's; and some fine *hybrids* between some *Rhododendron* and *Azalea sinensis*, I believe from the collection of Mr. Sherwood.

A PHILADELPHIA GARDENER.

MIGNONETTE IN WINTER.

Reseda Odorata, or Mignonette is a native of Africa, and has been in cultivation rather more than a century; poets have immortalised it as "the fragrant weed," and, although a plant of humble appearance there are few flower gardens considered complete without a small patch of mignouette. It is of easy culture in the border during summer, requiring, however, a deep, well enriched soil to enable it to grow luxuriantly in hot dry weather. To produce it in pots during winter requires a little more care; those who have the convenience of a greenhouse, will find room for a dozen pots on the front shelf; where no such convenience exists, the parlour window may be supplied all through the winter, with the assistance of a close glazed frame. Damp is perhaps, its greatest enemy, if kept dry a few degrees of frost will not materially injure it. Pots or small portable boxes are most convenient for growing it in winter, if these latter are made to fit the window intended for their reception, a fresh box can be introduced when required, and the plants will thus present a constant healthy appearance. A friend of mine who always has it in great profusion, grows it in a small pit running along the front of his greenhouse; where a lasting and abundant supply is desired, this is the best method I have ever seen practised. Usually there is a front shelf of more or less breadth in all greenhouses, if this was made portable a small pit might be constructed underneath, thus affording a fine site for flowering roses, heliotrope, mignonette, &c., in winter, the shelf could be replaced when the pit was unoccupied. To have it to flower in January, seed should be put in from the first to the middle of September. Particular care will be required in the preparation of the soil with regard to drainage, as it will not succeed well unless water finds a ready access through the soil. A tolerably rich, loamy soil should be used, and the pots filled firmly to within half an inch of the top, made smooth and level, the seed sown and slightly covered with fine soil; five inch pots are as suitable as any; thin out the young plants gradually as they grow, until they are reduced to four or five in each pot. Excess of water should now be avoided, and protection afforded against heavy rains. The roots speedily find

their way to the bottom of the pots, and even, although the surface appear dry, they will still have sufficient moisture in the soil ; this can only be ascertained by close inspection. It will be better to err on the safe side and keep dry rather than wet. To winter them in a cold frame it will be necessary to secure a dry bottom, by filling up a portion of the frame with cinders, brickbats or similar material. The pots should be plunged in coal ashes and elevated to within six or eight inches of the glass, water must now be very carefully administered, much of success depending upon the dryness preserved about the pots. In fine days the lights should be drawn off. To guard against frost the sides of the frames should be banked up with litter, and straw mats should also be in readiness to cover the glass in severe weather. A bundle of loose straw or hay will form an efficient protector, and be readily shaken on the lights when requisite. In very severe snowy weather the covering may remain on for several days, observing to uncover on a dull day and shade from direct sunlight for a day or two afterwards. The necessity for keeping everything as dry as possible will thus be apparent, both in regard to resisting frost and guarding against damp. All premature flowers should be pinched off, and those plants that are to be kept for succession should have their points pinched out. A single plant in a pot may be grown to a large size, by continually suppressing the flowers. If not too far gone the plants may be turned out in the borders by the month of May where they will again start into fresh growth. DELTA.

NOTES ON ROSE CULTURE,

BY A LOVER OF ROSES. (Continued.)

BENGAL, or as some call them, Daily Roses contain the type of all monthly or Daily Roses, which is known the world over, or as far as English goes, as the common China or Daily Rose. They have one fault which is unpardonable in a rose, and that is want of fragrance to a beautiful painting we never have an incentive to apply that sensitive organ, but in all flowers that sense expects to be gratified.

To the lover and amateur I can only quote a few as deserving notice.

Agrippina, or *Cramoisi Superiere*—is the first and the best of bright crimson daily roses, profuse, brilliant and beautifully perfect.

Cels, or *Cels' multiflora*—blush, with dark pink centre, double, profuse and indispensable.

Gros Charles, *Arch-Duke Charles*, *Isadore* and *Triumphant* are all nearly alike, changeable, rosy lilac to crimson, of strong growth.

Louis Philippe—crimson, with paler centre, of strong growth and profusion of bloom; one half of the red roses sold in Philadelphia market as *Agrippina* are this variety, it is much better adapted for forcing than the latter variety.

Lady Warrender—when you can find it, is the best white, unless some of the recently introduced sorts excel it, in that are highly favored by descriptions; but you my dear sir, and your readers, as well as myself delight in a *clear proof*.

Madam Breon—large bright pink.

Queen of Lombardy—a fine rosy red.

*King of the Crimson*s, or *Eugene Beauharnois*—dark crimson, and a little fragrant.

Viridescens—green flowers; a curiosity.

These form the leading and fine sorts of the Bengal Roses, they are all sufficiently hardy to stand out in winter, in any dry soil south of Philadelphia.

PERPETUAL ROSES, were first brought to our notice about 1831, by a publication of Hibbert and Buist, then Florists in Philadelphia, a perpetual crimson fragrant rose, was then the height of my ambition; a friend of mine now a druggist in your city, who was always ahead in those matters, posted three miles out of town and bought the great prize, but it turned out to be a *Sanguinea* in place of Lee's *Crimson Perpetual* or *Rose du Roi*, now so well known and so generally cultivated; to me it is the only one of the group that deserves notice; the type of this variety is the monthly *Damask* and I have not the least doubt that from these has originated the Hybrid Perpetual Roses.

CLUSTER ROSES—I could never well understand the distinction between cluster and noisette roses; however, florists make it and we suppose we must follow suit. Noisettes cluster just as much as those I am about to name. If it is the musky odor so peculiar to the old white musk cluster rose, that characterises the group, I must say very few of them possess more than the old stump that traces out these scrawls and the odor is peculiar only to the white roses of the group. I have never seen a rose that I could call a red or pink musk cluster. *Herbemont's White*, is a very excellent and one of the best light cluster roses, always in bloom, profuse and of fine growth, but no musky odor.

Princess of Nassau—is also a fine white, quite double and has a musk fragrance.

White Musk Cluster—the type and standard of this peculiar class.

River's Musk Cluster—is pure white and has an abundance of the musky odor about it to rank amongst the best, though in beauty of its flower it is almost the worst.

MICROPHYLLA ROSES—have all an agreeable and distinctive foliage, with flowers not to be despised for size or form; they are all of free growth and amongst them is our very best white climbing rose; they do not appear to be so much propagated as formerly, for we rarely see them in our markets.

Alba Odorata or *white microphylla*—is a rapid grower, with luxuriant dark green foliage and long flexile shoots adapted for columns or arbors, and bloom from June till October, it is sometimes called *Maria Leonida*, which is a very distinct dwarf variety, with somewhat similar foliage and flower.

Rosea—is the *Burr Rose* readily recognised by the bud having that peculiar appearance indicated by the local name—flower large very double, flat formed, no fragrance, and of a bright rose color makes a large bush, or does well for a fence or column, blooms frequently during the season from wood of the preceding years growth—there are several other sorts not worthy of note for either flower or foliage.

Moss Roses—what rose is that? It is the *Angeline moss*, a fine flower; yes—but I do not see any moss on it; such might be the reply to many of those called moss roses. In truth, I have not only seen the moss rose; the old fashioned moss; there is a charm about its mossy bud that no other rose has; it is above all others “the moss rose,” there are, however, others very desirable and which can properly be accompanied with the attractive name, and more recent years have given us the perpetual red moss and some others *not* altogether misnomers; a few of such will suffice for the fancier.

Blush Moss—a good moss of a fine blush color.

Common Pink Moss—“the moss rose.”

Crested Moss—splendid pink flower with a luxuriant green fringe to its calyx.

Luxemberg or *Scarlet Moss*—bright crimson, and a good moss.

Princess Adelaide; or *Hybrid Moss Rose*—color lilac, blooms in profuse cluster and a rampant grower.

White Moss—very similar to the common pink moss, with a white flower.

White Perpetual or *Cluster Moss*—a curious sport from the white damask rose; has no intrinsic value unless the name.

White Provins Moss—a fine, white variety, and of better growth than the white moss, the buds are frequently in clusters.

General Dranot and *Herman Kegel*—are said to be perpetual moss roses; the latter of these I have not seen a second bloom on it after a growth of two years; the former does give a second and occasionally a third bloom, but not worth the notice that is taken of them.

PRAIRIE ROSES—are natives of this country, and for their great improvement we are mainly indebted to Mr. Samuel Feast of Baltimore, and we still cling to him for a real good perpetual Prairie Rose, after that he may weep as did Alexander; and I would suggest that he send you a plant of his Prairie King, for your sanctum in Philadelphia, and report it in the Florist.

Anne Maria—rosy blush, very double.

Baltimore Belle—pure white, the best white.

Beauty or Queen of Praries—as yet the best pink flowering sort.

Linnean Hill Beauty—pale rose.

Mrs. Pierce—bright pink.

Superba—pale waxy blush.

Triumphant—dark rose.

The prairie roses make very rapid growths, and are not equalled for covering arbors, wall and trellis work; they bloom just after the full flush of the rose season, filling up a very desirable space; they root readily by laying a branch in the ground in August; you can in the following spring remove it to become a permanent plant.

HYBRID CHINA ROSES—bloom only once, but are of great beauty of form and color, having amongst them every variety of color, except green; as I am not particularly attached to the family, perhaps some other of your fanciers will give us the leading characters in the group.

Hardy Garden Roses—embrace all those that are known as provins, Gallica, moss and sweet briars; and in this group are the only perfectly striped and yellow roses. The French promise us a striped hybrid perpetual, but it may come like the yellow moss. Of the stripes worthy of note, *Oeillet parfait*, *Oeillet flammand* and *Village muid*; nearly all are having white flowers with decided pink or lilac stripes the whole length of the petals; of yellow we have only the *Harrisonii*, an American Rose, and the *yellow Persian*, the latter decidedly the best of the two; neither of these yellows require much pruning as the flowers are produced on the short spears of the wood of the preceeding year, they therefore, require to grow into large bushes before their beauties are fully displayed.

PROPAGATION—the many forms of multiplying plants are known only to nurserymen and those who make a living by the business of multiplication; we however, know enough of the art to increase our stock for pleasure.

BY CUTTING—any person will succeed with the Bengal, Tea, Bourbon and Noisette sorts; during August and September take off short pieces of the wood that has produced flowers, close to the wood from whence it grew; cut its base evenly and smoothly, reducing it to three or four eyes in length; cut off the leaves and

plant it in light sandy soil where it is shaded from the midday sun; give frequent sprinklings of water and they will root in a few weeks. Many of the hybrid perpetuals are multiplied in the same manner. Layering can be practised on all sorts of roses. In July, August or September take any of the young shoots that you can gently bend to the ground and with a sharp knife cut off a few leaves where they are in contact with the soil, at the base of each of those leaves there is an eye; enter the knife just behind the bud and cut towards the point of the shoot about one inch gradually into the middle of the shoot; you will thereby form a spur about an inch and a half long with an eye at its base; place the part thus operated upon about three or four inches under the soil, covering it with light, sandy, rich earth, tie or peg it down, or place a small stone over it; the following spring it will have rooted and can be removed to wherever required; on its removal cut down the shoot to within a few inches of the ground, protect the remainder with a small stick and the work is done.

Budding—is more readily accomplished and is a more pleasing pastime, the requisites are a good knife, good free growing stocks, with good thread of worsted, matting, or strong cotton twist. The time of performance from June to October, during cloudy weather; whenever the bark of the stocks will remove or rise with the knife showing an abundance of sap under the bark. A budding knife with a thin ivory handle, is the best for the purpose. It should be inserted about half an inch above the bud, and passing about one third of the way through the wood of the shoot, come out again about the same distance below it, the cut being as clean as possible. The portion of the bark in the centre of which the bud is situated, is called the shield, and when removed it contains a portion of the wood, which is to be carefully removed with the point of the knife; if the wood is dry, and does not separate readily, it is a sign the bud is too old, and it should be rejected. When the wood is too old or too young, the shield may be taken off only about one quarter of the way through the shoot, and inserted into the stock without removing the portion of wood it contains; this method, particularly with very young shoots, is very successful.

In applying the bud to the stock an incision is to be made lengthways through the bark, but not so as to injure the wood ; about an inch in length, and this is to be diagonally crossed at the top by another incision. The thin ivory handle, or back of the knife, should then be used to raise the bark, and the shield inserted within, gently pressing it to the bottom of the perpendicular incision ; when it is properly placed the portion of it above the diagonal cross should be cut off, and great care should be taken that it is in close contact with the wood of the stock. When this is done, bind up with matting, or cotton twist, all except the bud, which must be left free to the air, but protected from the powerful action of the sun, or wet, either of which would defeat the whole operation, and in two or three weeks the bandages must be loosened, though not entirely taken away. About the end of October the plant should be cut down to within a foot of where the operation has been performed, which will greatly tend to strengthen both the tree and buds that have taken. In the following spring all the stocks should be deprived of their superfluous wood ; observe, however, to leave one bud or eye above the inserted bud, which will greatly assist its growth until it has made a few leaves, and is fit to perform the functions of vegetable life when the natural shoot must be cut off. As the new shoot grows, have it carefully supported.

THE NELUMBIUM SPECIOSUM.

Springbrook is famous for its novelties. From the Florida moss to the "spiritu sancto" of the newspapers, or the modest *Sarracenia* to the *victorious* Water Lily—few things valuable or rare escape attention. The successful cultivation of the *Nelumbium* in the open air is another branch in its garland. An oval tank perhaps fifteen feet in its longest diameter is covered with noble leaves, some of them two feet in diameter. The flower buds are now a foot above the water, and in a month or so must form a splendid object. Few who have read at all, but are acquainted with the glowing descriptions of the beauty of this plant given by East India travellers. Apart from the beauty of the flowers, the plant supposed to be the

Egyptian Bean of Pythagoras, and the Sacred Lotus so profusely sculptured on the sacred monuments of Egypt, would at any time possess an interest. The scarcely paralleled liberality of Mr. Cope in throwing open his grounds to the Horticultural public, and the free inspection of his rare pets, will doubtless be taken advantage of by many of our friends before the close of the season, to see this fresh "stranger on our waters."

McAVOY'S EXTRA RED STRAWBERRY.

In the Western Horticultural Review, in reply to some observations of the "Prairie Farmer," Mr. Longworth says, "Mr. Meehan has not got the true Extra Red. I have never seen one perfect blossom on my plants." I reply, as I replied to Mr. Prince, that if Hermaphrodite plants can be obtained from runners of Pistillate ones, the sexual unchanging theory is overthrown, no matter whether the plant which we employ is "the true kind" or not. In the case before us the different kinds of sexes are actually on the same plants. When Downing produced his strawberry, it was pronounced "not Hovey's." When I did mine, still the same, "it is not Hovey's." I thought two distinct scapes on one plant *must* settle the question, but again comes up Banquo's Ghost, "it is not the Extra Red." However, I will *prove* my kind genuine. About the first week in August, 1852, we received three plants which came *directly* from either Mr. McAvoy's or Mr. Longworth's hands, through the most reliable source in Philadelphia. These plants were planted by themselves by myself. Still, it may be objected, an unusual accident may have occurred even with these gentlemen. When the plants flowered, their mixed sexual character was noticed by me in the Farm Journal. In a letter dated June 3rd, Mr. L. writes what I extract as follows :

"I raised the Extra Red in my garden, and never noticed any staminate or Hermaphrodite blossoms on it. My gardener this season informed me that he did. It seems you observed the same. There is no reason why pistillates should not have some Hermaphrodite blossoms."

Without waiting to inquire whether the last sentence does not really grant all I ever asked for, I would respectfully ask Mr. Longworth whether the fact of Mr. Pentland's having noticed *the same* tendency to vary in the "true kind" as I did in mine, does not go a long way to prove the accuracy of my own? I fear that our esteemed Vice President, Dr. Brinckle, and the rest of the committee who reported so favorably of "our Extra Red," will not consider themselves "highly complimented" by learning that their encomium has been lavished on a *spurious kind*. Nor will our Cincinnati friends be well pleased to learn that a "not true kind" has "crept into the bed (borrowing a style supremely Cincinnati) and stole the praise due to the original."

THOMAS MEEHAN.

MORE ABOUT THE STRAWBERRY.

MR. EDITOR:—I have grown the strawberry extensively for over twenty years; both the old sorts and the new varieties; and I have tried many experiments in pots and in the open ground, and with different kinds of soil; I have been minute in my inspections and observation of the fruitful organs of the different varieties, and have conversed with many scientific botanists and practical gardeners on the subject, and have always arrived at this conclusion, that the predominance or deficiency of pistils or stamens in any variety was as permanent as the variety itself, and nothing but ocular demonstration will ever convince me of the contrary. I could never under any treatment make a pistillate variety produce a hermaphrodite flower, or produce a perfect seed that would germinate and make another plant, unless it had been influenced by some staminate variety. I believe that "with God all things are possible," but I think it beyond the power of culture or man's ingenuity to change the sexual organs of any plant. If Mr. Meehan has made a wonderful discovery or witnessed a singular phenomenon, I think that his theory can never become general, and it will be a difficult task to force scientific and practical men to believe it, and as he has deviated so much from the point of discussion in his last communication, people will think that he wishes to get rid of the controversy altogether. Oak leaves and the leaves of *euonymus japonica* can have no reference whatever to the fruitful organs of strawberry plants. The *Catalpa* tree is a hermaphrodite plant, wherever it is grown; "old botanists" made a mistake with it as they did

with many other plants, for example, the *Alonsoa*, *Celsia linearis*, which is in *Didynamia*, 14th class, was once *Hemimeris coccinea*, and placed in *Decandria*, 2nd class. The *Catalpa* grows spontaneously around here, it is not removed so far from its natural locality; the *Brugmansia Knightii* could not have two corollas one one flower, although that corolla might be double, the *Leontodon taraxacum* has a very double flower, and yet its whole number of polypetals are included in one corolla; and the monopetal of the *Datura* or *Brugmansia* makes one corolla; petals can never become stamens, but if the *Brugmansia Knightii* has sometimes five stamens and sometimes ten, then it does not belong either to *Pentandria* or *Decandria*, 5th. or 10th. class, and therefore should be placed in a class by itself.

Now you see that I am one who has failed to do as Mr. Meehan has done, and if ten have been successful let them come out and place Mr. Meehan in the right; this is my first and last article on the strawberry controversy.

Respectfully, WALTER ELDER.

Mr. Elder mistaken in a great many points;—in the first place, in his assertion of the unchangeableness of the staminate or pistillate characters of strawberry flowers. Facts are against that theory;—Mr. Meehan has shown plants which had both kinds of flowers. The Cincinnatians and their supporters are like the French Abbe who had announced a new theory; being told by a friend that the facts were opposition 'to it—he replied "*tant pis pour les faits*," "so much the worse for the facts." Mr. Meehan has announced nothing new, he has merely proven what has been asserted before, and what has been all along believed by some of our very best cultivators. Again, if there is any truth in science, the pistils, the stamens, the petals and sepals, the bracts and leaves are all different developments of the same principle; by hybridization we often change the development of different parts, the stamens become pistils, or the contrary; the stamens are changed into petals making double flowers. Oak leaves and the leaves of *Evonymus japonica* are evidences of changes in shape and colour produced by certain influences, and if in shape and colour, why not in other characters? *Leontodon taraxacum* is a compound plant, and is really a head of many flowers; what Mr. Elder takes for petals are merely rays of the involucre. I have before me a rose which is growing out of the seed vessel of another, it is not an uncommon thing to see, but it is a good illustration; it is merely a change of development; in place of perfecting its seeds it has continued its growth and produced another flower, sometimes a shoot is produced in the same way, as is often the case in pears and apples. A slight acquaintance with Morphology, or the laws of the development of the parts of plants and flowers would convince the upholders of the Cincinnati theory of its entire fallaciousness.

MR. EDIOTR:—

The strawberry question seems to be undergoing a fresh investigation, and as usual our Cincinnati friends are extremely sensitive on the matter. I do not intend at present to enter into the subject, but cannot help remarking that they should now consider it high time to give philosophical argument instead of burlesque, and confine themselves strictly to the question at issue, without a constant reproduction of the stereotyped tirade about the ignorance of Linnaeus (who, by the way I presume was no practical floriculturist, but confined his investigations chiefly to plants in their natural state rather than to those which had undergone the ameliorating process of cultivation); and let us have at least *one* essay without allusion to *that* venerable female "in the backwoods," and the precocious occult development of the children "five years of age who can discover the sexual characters of the strawberry at a distance of twenty feet." I have frequently thought that the strawberry reports from that region emanated from young pomologists, but certainly did not expect that acidity was turned into sweetness by palates so very tender. It may be well, however, to remind our western neighbours that the mere distinction of the varieties is not the point at issue, but whether under certain treatment they are not liable to change. It is mere evasion of the question to lead us away among the strawberry growers in Europe. They seem contented enough with their produce, and if they are behind the age it would be better to show them how to improve, rather than upbraid them for their ignorance.

FRAGARIA.

UNDERDRAINING.

Were we asked to name any single operation that would most improve American agriculture, we should unhesitatingly answer, thorough underdraining. "That," says one, "is a strange idea; my farm, and most of the farms I am acquainted with, suffer more or less from drought every year, and I should prefer *more* rather than *less* water on my farm, especially on the grass land." That, my good sir, is precisely what underdraining will do for you. It will remove all excess of water in the fall, winter, and early spring, when the plants need but little; and in the summer time, when plants need large quantities of water, and the undrained soil is very dry, it will make the soil quite moist and supply the plants with sufficient water. "That," you say, "is *contradictory*; and however plausible it may be in theory, I guess it will not work in practice." In that you are wrong. In this, as in most true agricultural theories, the theory has been induced from practice. Every farmer who has tried underdraining, knows, whether he

can understand the cause or not, that his drained land is much drier in a wet time, and more humid in a dry time, than his undrained land, and that it will stand a drought very much better; in fact, that droughts seldom affect his well drained land. Let us examine this a little.

If you take a common sponge, and dip one end into a basin of water, the whole sponge will become thoroughly saturated, the water rising very far above its own level. If you take a narrow glass tube, open at both ends, and plunge one end into water, you will observe the water rise, contrary to the law of gravitation, much higher in the tube than the external surface of the water. Dr. HOOK, when experimenting on this subject, made glass tubes so fine that the water rose in them twenty-one inches above the level of the water in the vessel. The law by which it rises is called capillary attraction, and is explained thus: the particles of water have a stronger affinity for the glass than for other particles of water, and consequently leave them and ascend the glass. The height to which they will ascend is probably in the inverse ratio of the diameter of the tube.

When a soil, especially a retentive one, is underdrained, the water as it percolates through it leaves innumerable small pores; it becomes like a sponge—a reticulated mass of fine tubes. These tubes, when the surface is wetter than the subsoil, carry down the water to the drains below; and when the surface is dryer than the subsoil, as it is in a drought, these tubes carry up the water to the roots of plants. Underdraining is not built on this theory, but the theory is founded on the practical results of underdraining, and will the more commend itself to practical farmers.

Plants can take their food only in a state of dilute solution. They cannot live and grow without a constant supply of fresh water. Stagnant water is exceedingly deleterious; no fact is better demonstrated than that agricultural plants cannot thrive, however well manured, so long as their roots are surrounded with stagnant water. The necessity for underdraining rests on these three facts. Not only does underdraining remove all excess of water, and supply it when deficient, but it equalizes the temperature of the soil. In the spring and fall, when a warm soil is so much needed for the germination and maturation of seeds, the thermometer shows that an underdrained soil is several degrees warmer than one that is not drained; while in very hot weather, the case is exactly the reverse of this. It is a well known fact that vegetation starts much earlier in the spring, and continues later in the fall, on a drained than on an undrained soil.

But beside the beneficial mechanical effect on the soil, underdraining has great chemical action. The removal of stagnant water and the free admission of air in its stead, accelerates the disintegration of minerals as well as

the decomposition of organic matter in the soil, rendering them both available as food for plants. Again, the rain, as it falls and filters through a well-drained, loamy soil, carries to the plants one of the most needed and expensive of all the constituents of cereal crops. Our readers need not be told that we mean ammonia. In our article on the Plowing in of Green Crops, in the June number of 1852, will be found some of our reasons for thinking ammonia the most valuable and necessary ingredient in all wheat soils. The rain water which falls on an acre of land in a year, is estimated to contain over 100 lbs. of ammonia, or sufficient for the growth of 17 bushels of wheat. The recent experiments of WAY and THOMPSON have shown that when ammonia is filtered through a soil containing a good proportion of clay, the ammonia is retained in the soil, and the water passes through free from it. Does this throw no light on the *cause* of the increased crops following thorough underdraining? The other *causes* we have mentioned are merely concomitants. It is well known that mechanical texture of soil, moisture, heat, electricity, and sunshine, indispensable as they are, will not grow crops unless the required constituents of plants are present in the soil in proper quantity and quality. Does it throw no light on the beneficial effects of summer-fallow on heavy clays. To our mind it gives a satisfactory explanation to these questions that is consistent with experience and well established scientific principles. It is simply, that the ammonia contained in rain water is retained by the soil as the water slowly percolates through it to the drains beneath. In the case of a summer-fallow, the constant plowing, dragging, &c., divides the particles of the soil, for the first few inches in depth, so fine that they are capable of retaining all the ammonia brought to the soil during the year on which it is summer-fallowed. This ammonia it retains for the succeeding wheat crop. But even in this case, if the land needs drainage, (and what land that should be summer-fallowed does not?) the full benefit is not obtained; all the rain which falls in the spring, autumn, and winter, when the soil is fully saturated, passes off in surface water, the ammonia it contains along with it, together with a considerable quantity of matter taken from the soil in mechanical solution.

The *cost* of underdraining is the most potent argument against its adoption. Thirty dollars is considerable money to invest on an acre of land; but it must be remembered that it is a *permanent* investment—when once well done it will last a century or more. It is not like laying out \$7 per acre in guano or other manure, which lasts but for one year, or two at most. It is a perpetual means of obtaining increased crops. The 100 lbs. of ammonia contained in the rain which falls on an acre per annum, cannot be purchased in guano, its cheapest artificial source, for less than \$15.

Greater part of this is lost on an undrained soil, while on one that is well underdrained the whole of it is or may be retained. The expense of cultivation is less on the drained than the undrained land. You can plow it earlier in the spring and later in the fall; and after heavy rains, when the land not drained is so wet that man nor beast cannot go on it, the drained soil will be in fine condition to work. The whole of the *increase in crops* obtained from draining must be considered *clear profit*. We believe *one-third* increase to be a low estimate; and as this one-third of the entire produce of the farm is clear profit, it will pay a high interest on the thirty dollars invested in underdraining. Any farm which from its location is worth \$40 to \$100 per acre, if it needs draining, cannot fail to pay a handsome interest for money judiciously laid out in underdraining.

The effect of thorough drainage on the climate of a country, is a subject too extensive and important to be discussed at this time. That it has a marked effect on climate cannot be doubted. Prior to the general adoption of underdraining in England, the wheat crop was generally affected with mildew, rust, smut, and various insects, to such an extent that the crop was quite uncertain; with the introduction of underdraining these blighting effects were removed, while ague, which was common before, is wholly unknown now.

Shade trees and forests, like large bodies of water, are well known to be great moderators of cold in winter and heat in summer. The disappearance of such vast forests has seriously affected the climate of this continent; hence peaches and other fruits are not those certain crops they were twenty years ago. The climatic equilibrium has been disturbed, and must be restored. We must cease to cut down so recklessly the noble forests, and at the same time must plant shade trees. This will have some effect; but we submit, that thorough underdraining will be found the best and most economical means of equalizing the climate, removing the insects, &c., which make such fearful devastation with the crops, and of improving our national agriculture.—*Genesee Farmer*.

NEW OR RARE PLANTS FLOWERED FOR THE FIRST TIME AT SPRINGBROOK THIS SEASON.

NO. VII.

LYCASTE HARRISONIÆ.—Two varieties of this are known to cultivators of *Orchidæ*, one with yellowish red flowers, the other with white. A fine variety bloomed for the first time lately in our collection with pale lilac flowers, each about two inches across, and with the lip deeply veined with rosy purple lines. It is of easy culture, thriving well in a moist atmo-

sphere, slightly shaded, with a temperature of from 65 to 80°, in pots of moss, broken pots, and charcoal.

STACHYTARPHETA MUTABILIS.—This is a family closely allied botanically with *Verbena*, but having more the habit and appearance of a *Lantana*. The leaves of this species are often four inches long and three wide, and the flowers appear successively in spikes nearly a foot in length. These are of a rosy, or vermilion pink, each flower something resembling a “beauty supreme” *Verbena*. It is of easy culture, thriving best in a light situation in a moist stove, or in the open borders in summer time. It was originally introduced 50 years ago into England, from South America, and is described in page 976 of the *Botanical Magazine*; but I believe does not now exist in their collections. Seeds were presented to Mr. Cope by Mr. Ezra Bowen, from the East India Company’s garden at Calcutta. It is highly ornamental.

CAMPANULA VIDALII.—A singular species, with succulent shrubby stems, and narrow, short, shining leaves. Flowering stems are thrown up from the ends of the strongest shoots, each bearing numerous white flowers. These are about two inches long, and are *contracted* in the middle. It grows well with me in sandy loam, in a cool greenhouse. Our plant was presented by Mr. Knorr, who imported the original plant from Belgium.

PHARBITIS LIMBATA.—Also from the same gentleman, and figured in a late “*Florist*,” grows “like a weed,” and produces us half a dozen of its beautiful white edged flowers every morning, in a light part of a moist house. It is growing in a pot of rich turfy loam.

INDIGOFEA DECORA.—One of Mr. Fortune’s discoveries in China, and one of the best of the recent introductions that I have seen. The flowers come out in the axils of the leaves of the young growth, in racemes from 4 to 6 inches long, of a rosy pink and white color. It will become very popular. It is easily grown in well drained pots of turfy loam, and grown in a light and cool greenhouse. It is very liable to attacks of red spider. Our plant was obtained from Mr. Hovey.

GOMPHRENA HOVEYI.—Under this name the *French* catalogues advertise Hovey’s new Globe amaranthus, while the *London* seedsmen offer it as a “new orange Globe amaranthus, from Texas.” Whatever it is, it is one of the few plants which occasionally appear, rapidly to become of standard value. It is specifically distinct from the common *G. globosa*—the head of flowers being ovoid or elliptical, and the peculiarly green leaves margined with long ciliated hairs. Several who had seed tell me they failed to grow. I soaked one-half my packet 40 hours in water, and the other just as it was. The former came up in a few days; the others failed.

LYCOPodium cœsium arboreum.—What the *Tree violet* is to the old *double blue*, this new variety is to the old one. The stems are near an eighth of an inch thick; and the fronds are about one foot in length. The shining changeable blue color that has always rendered the old kind so welcome in all collections, is even deeper in this. It is the admiration of every one who sees it here. It thrives well in a soil formed of broken sticks, charcoal, and leaf mould, with about a fourth part of turfy loam, in a moist and shady part of the Orchid House. It was obtained through Mr. Buist.

PROMENEA STAPELIOIDES.—A small orchid belonging to the *Maxillaria* division. It is not a showy thing, several dozen pseudo bulbs only occupying a circle of eighteen inches; but the flower is very pretty, about an inch across, imitating as its specific name imports, the color and markings of a *stapelia*. It grows best suspended in a basket of coarse moss. Imported by Mr. Cope, from Messrs. Loddiges, of London.

***JUSTICIA BICOLOR.**—Under this name we received from Mr. Buist this spring, what I consider one of the prettiest introductions of the season. The plant does not seem a strong grower, or inclined to be very bushy. Ours is now, after every encouragement to grow, not over a foot in height; but it has been completely covered with flowers for the past 3 months. Each flower is of a pure white, with a large crimson blotch on the lower division of the corolla. It is growing in sandy turfy loam, in a rather shady greenhouse, and will probably require the protection of a warm greenhouse or stove in the winter.

DIPLADENIA SPLENDENS.—Although not ten years since this was introduced into English collections it has there become a standard plant for exhibitions. It was formerly considered an *Echites*, and, like that family is a climber, or as we must here say, "a vine." The flowers appear in clusters in the axils of the leaves, on the young wood, each being about 2 inches across, of a delicate pink color. It thrives well in any turfy soil in well-drained pots in a warm greenhouse. Our plant was obtained through Mr. Buist.

My friend, William Grassie, had *D. crassinoides* at our last meeting in flower, from the collection of Mr. Keen, West Philadelphia. It is a much smaller species than the above, but very desirable.

THOMAS MEEHAN.

CALENDAR OF OPERATIONS.

FRUIT.

Strawberries.—Plantations may now be put down; see that the soil is thoroughly prepared, and select young plants from healthy vines that are in a good bearing condition. Old worn out plantations afford weak runners, and should never be employed if plants from robust beds are by any means attainable. Another point to be observed, is to plant a due proportion of staminate along with the more productive pistillate varieties. In a previous allusion to this fruit, the remark was made that, "notwithstanding all that has been written on the subject, many good cultivators pay no attention to their sexual character." From the above remarks we have been accused of endorsing the statements of those who maintain that there is no distinction in their inflorescence, we merely stated a fact, well known among strawberry growers; if all were agreed on the subject we might look for a settlement of the strawberry question. After planting spread a mulching of rotted manure between the rows. This in the meantime will arrest evaporation and shelter them when frost occurs. Tan bark is also good for this purpose; we lately saw a statement to the effect that tan bark used in this manner had killed the plants. Doubtless their death was attributable to some other cause; we have used it many years with successful results on various kinds of fruit as a mulcher. A few days ago we visited a gentleman who grows strawberries rather extensively, and were shown a two acre patch planted last fall, that had received a heavy coating of bark; we do not remember of ever seeing strawberries of the same age so strong and luxuriant, although the weather has been particularly unfavorable for their growth; we cannot, therefore, conclude that tan bark applied in moderation is hurtful to plants.

Grapes in houses—will now be maturing their wood for next season's fruiting. Air may now be more freely admitted than at any other period of the year. Heavy rains should be excluded, and if it be deemed desirable to water the roots, a thorough soaking should be given, and the surface subsequently stirred up, to prevent evaporation, it being desirable to have the atmosphere as dry as possible.

Grapes, out doors—the principal attention requisite here will consist in tying up the branches, and securing the fruit from injury by winds. The extreme points of leading shoots may be pinched, but no further diminution of foliage should take place until the fruit is gathered.

Planting—now is the proper time to make arrangements for fall planting, both in regard to the preparation of the soil and selecting the trees. A much better estimate of the habit, health, and general condition of the plant

can be made when it is in foliage, than when in a deciduous state; we would here caution your planters not to fall into the error of those, who "measure men as they do a steeple, by its length," and value young trees according to the amount of timber they contain. Medium sized trees will transplant with more certainty, are easier handled, and in nine cases out ten will grow *faster* than those of the largest nursery size. It is quite a mistaken economy to suppose that by planting large trees you hasten the production of fruit. The older the trees are the stronger are their roots, and these must necessarily be cut more or less in lifting. The head must then be reduced to correspond with the reduction of roots. The plant may then receive the name of a stump and its life or death a matter of uncertainty; on the other hand a young tree, say two years from the bud, has made few strong roots, and will come up with a large portion of fibry roots, and if managed with ordinary care, and transplanted at once, will scarcely ever show that it has been changed, and in six or seven years will be worth double the larger sized tree. Much disappointment in ornamental planting arises from this cause. Large trees are preferred for the purpose of giving immediate effect. In the removal of evergreens more especially we have seen the folly of planting old trees; we have seen trees ten feet in height and others not four planted at the same time and in five years the younger trees were tallest and much more healthy and beautiful. This of course, has reference to general planting. Trees of a very large size *may* be removed if carefully managed, without feeling the change. There is also, much difference in the tenacity of growth in different kinds of fruit trees; Peach and Quince will stand much indifferent treatment and still make a good growth. Pear, Apple and Plum do not grow so readily after the roots are "cut and dried." But all trees remove safest when young, you can also train a young tree to your mind, and start it with a good low head. Tall, bare stems are unsightly, inconvenient, and the trees more liable to casualties.

Budding—the season for this operation is now at hand. We do not advocate the propriety of amateurs raising their own stock. It is something akin to seed saving, the articles can be purchased cheaper from those that make it a business, than they can be raised on a small scale. The only exception that might be made is in peaches. Seedlings generally come up in the neighbourhood of bearing trees; using these as stocks, a few duplicates of superior varieties may be secured to fill up blanks as they occur among the older trees.

S. B.

SEPTEMBER.

FLOWER GARDEN — *Evergreens*, where not yet planted, will continue to claim attention. In addition to what was said in connection with the sub-

ject last month, I might observe that in planting those which are somewhat tender, or the perfect hardiness of which we have any doubt, situations protected from the sun in winter, should be preferred as well as a light dry soil. Where frost kills its thousands, the sun slays its ten thousands. The discrepancies we often find in statements of the hardiness of certain evergreens, arises from their different situations. I have frequently seen the English Laurel (*Cerasus laurocerasus*) killed in the neighbourhood of Philadelphia; while in the same vicinity a fine specimen on the north side of the residence of Pierce Butler, Esq., and completely in the shade, has long stood without injury. In the severe winter of 1851-2, most of the English Ivy (*Hedera Helix*) in Philadelphia, was destroyed on east, west and southern aspects; while on the northern it was uninjured. Towards the end of the month favorable opportunities may arise for transplanting *deciduous trees*, which should not be lost. If the soil can be caught in a moist condition, the sooner trees can be transplanted after the fall of the leaf the better. If they cannot be planted till late in the fall, they will be liable to be "drawn out" by the frosts of winter, which will thwart any advantage that would otherwise accrue from autumn planting. Tender deciduous trees do not suffer so much from the sun in our winters as evergreens. This is, perhaps, owing to the superior manner in which our summers ripen the wood of these trees. In Mr. Butler's place, before alluded to, there is the finest specimens of the *Acacia julibrissin* I have ever seen, growing close to the house on the sunny side; and yet it is seldom kept over the winter in many places around.

Lose no opportunity of observing what does well in your locality for bedding out, and prepare a stock of it for another year. In this locality, which suffered much from drought this season, *Plumbago Larpentæ*, *Pentas carnea*, the Madagascar periwinkles, and the various kinds of *Sagittæ*, and *Petunias*, seemed in their best elements. Amongst *Verbenas*, I consider Hovey's America the best white for bedding; *Heroine*, blue; *Orb of Day*, crimson. *Lucia rosea* of former years, gave us a fine pink "scarlet" geranium for bedding; we now have a *white* kind; it makes a beautiful bedding out plant. "Flower of the Day," with its variegated foliage, also does well, *Asclepias curassavica*, does very well; as also do all the *Lantanas*.

GREENHOUSE.—Repairing, and thorough cleansing must not be delayed. Painters say this is the most advantageous month to paint wood work. Whenever the night temperature falls to 40, any tender plants in pots should be housed, without waiting for "the first week in October." Things nearly hardy, as *Azalea*, *Rhododendron*, *Oranges*, &c., do best out "to the last."

Any desirable plant for forcing, that may be growing in the open border, if potted early in the month, will do very well for that purpose. *Weigela rosea* does excellently this way; as also does *Jasminum nudiflorum*, *Forsythia viridissima*, many *Spiræas*, and Persian lilacs. Roses and other things intended to be forced early, should have as much air, and be kept as dry as possible without injury. Hyacinths and other bulbs should also be potted as soon in the month as they be obtained; the former are best planted an inch deep. The earlier bulbs are potted the finer they flower—you may get *Catalogues* of any number of kinds or colors at the *auction marts*. If you get ten per cent as represented, when they flower, you will be more favored than the writer. *Mignonette*, *Rhodanthe Manglesii*, and similar ornamental annuals essential for winter blooming in well kept houses should be sown at once. Many things for next season's flowering, must not either be forgotten. The Pansy, *Calceolaria* and *Cineraria*, are in this class. Plants of these that have been kept over the summer will require a re-division, and kept in a close frame a few days afterwards till they get re-established. Propagation of all things will still require constant attention. It should always be an aim to possess one duplicate plant, as a provision against accidents. In many cases young plants are preferable to old ones; so that the old ones may be destroyed when these are obtained.

HOT HOUSE.—The *Aeschynanthus* will soon be in the chief ornament of this division. Their number has increased so that they have become quite a feature. If the pots seem full of roots, they may still have another shift—they prefer very fibrous peat; or, if that cannot be had, turfy loam, mixed with a portion of coarse moss. They will, however, do pretty well in small pots. *Achimenes* and *Gloxinias*, as they go out of flower, should be kept dryer and cooler. Look well after a good stock of *Pentas*, *Cestrum* and *Habrothamnus*; they will go far towards keeping up the interest of the department in winter. *Justicias*, and *Acanthaceous* plants generally will probably require another shift if fine specimens are desired. The atmosphere, if the house be light, can scarcely be too moist for them. *Plumbago rosea* is one of the most valuable stove plants I know for winter flowering; it requires a strong heat. *Clerodendrons* as they go out of flower, should be kept in a very airy situation, and rather dry, preparatory to being cut down and treated like a *Pelargonium* for another year. Many *Begonias* will be past their best flowering stage; very little watering serves them; they are very liable to damp off by incaution in this respect. It is difficult to lay down rules for orchideæ, so much depending on the circumstances under which they are grown. Those which have finished their growths—as many *Dendrobiums*, *Oncidiums*, *Catasetums*, &c., whose flowers appear just before new growth, should have their supplies of moisture

gradually lessened. The temperature, also, is better gradually lowered a few degrees, and they should be allowed more light than usual. The period when they are about completing their growth is the most critical, as any check at this time, spoils the prospects of much blossom for next season. Those which flower from the young growth, as *Catleya*, *Laelia*, *Broughtonia*, &c., will require their moisture and heat rather increased than otherwise till after their flowering. *Vandas Angraecums*, *Saccolabiums*, and other strong rooting aerial kinds, will require constant humidity until it is evident from the points of their roots, that they desire to stop growing. I am often asked "how often orchids require to be syringed?" If the situation in which they are growing be favorable, that is retains in its atmosphere a regular humidity, they will require very little attention; in many cases not requiring the syringe once a week. Where this cannot be effected the syringe must be oftener applied, as a rule I think no better one could be offered, than to syringe orchids just so much as will barely keep moss attached to their block and baskets green and growing. The real terrestrial orchids will require no moisture at all after they have completed their growths, until they show signs of pushing again. Care against checks in temperature and humidity, is one of the secrets of successful orchid growing. Those which are at rest do well in a temperature of 60 at the lowest. Those which are growing well should be kept at about 80.

VEGETABLE GARDEN—*Celery* frequently gets injured by being earthed up for blanching too much; the soil should never be allowed to get in the hearts. *Turnips* for the main crop are better sown this month than earlier; being less liable to become pithy, and keeping to a later period in the spring. *Endive* will be ready for blanching—the best way is to put over each plant an inverted flower pot with the hole stop'd up, doing a few every week to keep up a succession. They do pretty well tied up with string like a *Cos Lettuce*. *Spinage* should be sown in a warm, dry and rich soil; when the ground becomes slightly frozen, if a light covering of straw be thrown over to protect it from the sun, it will come in very early in spring. *Radishes* late in the month may be sown in a spot, where, on the approach of frost, they may be protected by a frame. They can be had this way in fine order till Christmas. *Lettuce* for spring and winter use, may be sown in a bed ready for planting out. The green and Brown *Hammers* with are the hardest; where slight protection can be afforded, the *Drumhead*, or the *Butter*, will be preferable. Early Dutch *Cauliflower* and *Walcheren Broccoli*, are staples in all good gardens. The latter is nearly hardy if kept from bright sun. It is a few weeks later than the *Cauliflower* in coming into use.

Towards the end of the month a bed of small *Onions* should be planted. Protected by a little loose straw they will endure the winter and come in early in the spring, when the old crop is "just out," and the new one not "come in."

T. J.

Botanizing during the hot days of summer is rather severe work; and we have tramped a good many miles under the severest rays of the sun. But in the last few weeks the weather has been often of the most delightful kind and we have taken advantage of several cloudy days, and made some interesting additions to our herbarium. The neighbourhood of Gloucester in New Jersey, is a very celebrated one for plants; we have been there frequently and never without being repaid—the trip down and up in the steamboat is cool and refreshing; quite different from toiling through the sand when once there.—Among the beautiful plants we have gotten we can mention the *Rhexia virginica*, which with its congener *R. mariana* are the only representatives of the order *Melastomaceæ* in the Northern States; the *Gerardia flava* and *Gratiola aurea*, showy and beautiful species of *Scrophulariaceæ*; *Lobelia cardinalis*; *Trichostemma* and *Monarda punctata*, well known among the *Labiata* or Mint Family, *Cassia marilandica*, and *C. nictitans*, with several species of *Desmodium* represent the numerous family of *Leguminosæ*. *Hibiscus*, *Oenothera*, *Ludwigia macrocarpa*, *Sida spinosa*, several *Polygonums* and various other plants add to the beauty of field, wood and swamp.

One of our most favourite walks is along the banks and through the woods which border the Schuylkill, a river which is without a rival for quiet beauty. Shut in as it is by lofty trees, spanned by fine bridges, and with here and there a stately mansion standing at the top of a lawn sloping to the river. Starting from the western side at Fairmount, passing by John Penn's house of "Solitude," the beautiful Eggesfield and Sweetbrier and the once magnificent mansion of Landsdowne, the seat of Richard Penn, now the property of Lord Ashburton,—picking up beautiful flowers and graceful ferns, and "hooking out" of the water the sweet smelling *Nymphaea alba*, we come to the Columbia bridge, opposite to Belmont, famous as the country seat of the witty Judge Peters, and as a favourite resort of General Washington. Here is that avenue of Elms festooned with ivy, which so excited the admiration of the late Mr. Downing.

Peter's Island in the middle of the river adds greatly to the landscape. Along the tow path blooms the graceful *Sagittaria*, the *Impatiens fulva*, the *Mentha* and other beautiful plants. Looking up from this point, the

river seems like a quiet lake shut in by the turn at Laurel Hill. The walk to Manayunk, about four miles further, is varied and picturesque; a rich wood above the Fall's bridge well repays exploration. Here we found, last spring *Orchis spectabilis* and *Corollorhiza verna*.

Crossing at Manayunk, a walk of two miles brings us to the mouth of the Wissahickon. On the river side below the creek is a steep wood where are many beautiful plants; along the river grows the *Tradescantia virginica*; the *Commelyna angustifolia*, the type of the natural order to which *Tradescantia* belongs is now in bloom and forms masses which in cultivation would almost rival beds of *Plumbago Larpentæ*—having here filled our "botany box," we made a strait walk for home, doing the six or seven miles at a pace which gave us an excellent appetite for dinner. We hope soon to be up further among the limestone rocks, where *Pteris atropurpurea*, and *Camptosorus* and *Asplenium pumatifidum* are now in fruit—if we see anything worth recording, we may give a notice of it.

THE ORCHID HOUSE AT SPRINGBROOK.

DEAR SIR:—The glazing of this house is not exactly the same as described in "Florist," No. 8, vol. I., and which is there termed the 'American system. It was originally on the old putty system, but in spite of great care would leak with every thaw. In the spring of 1852, all the putty that could be got out was removed, and its place painted over. This being found to answer admirably, all the putty was subsequently taken out, and the glass merely painted in, the loose ones being first tack'd in with tin glazing sprigs—with the exception of the glass laing on the old putty, the house is correctly as you described it. It appears to be entirely without putty to all but close observers. Though our glazing originated from necessity and not from imitation, I was subsequently made acquainted with the fact of houses being frequently glazed on this system in the neighbourhood of Boston. I believed the *Florist* had the merit of first making this system known, till I afterwards found that it properly belonged to *Hovey's magazine*; one gentleman denies even this, and is "surprised at our ignorance." His "surprise" adds nothing material to my information. I would thank him much more for a reference to the journal in which the system I styled American, was published previously to Hovey's account.

THOMAS MEEHAN.

MR. EDITOR :—There is a large tree of *Magnolia conspicua* now in full bloom in the garden of Mrs. Eliza H. Burd, at the S. W. corner of Chestnut and ninth streets; it was purchased from Mr. James D. Fulton, for ten dollars, two years ago last February, and then transplanted; it was full of buds, which all expanded well at its regular time of flowering, (the end of March and beginning of April,) the following spring it had only half a bloom, last spring a full bloom, and now a full bloom again. I never heard of such a thing before. The tree has been left to nature ever since it was planted. I sent you two flowers yesterday, which I suppose you got.

There is, also, a large bush of *Laurestinus* now in bloom in the garden of Dr. Charles D. Meigs, Walnut street; it was planted a year ago last spring, and a glazed frame or case placed over it during the winter; it lost eight inches of its top the winter before last, but pushed out vigorously again the following spring, but did not bloom; last winter it did not lose a leaf and yet did not bloom; about the first of June last, it began to form flower buds, and now there is a cluster on the point of every shoot over the whole bush; many have expanded, (one of which I sent you along with the *Magnolia*) and in about a week it will be in full flower, this too, is also singular, as April is the natural month for *Laurestinus* to flower in.

If you think these notices worth giving to your readers, you are at liberty to do so, if not you may light your segar with the paper.

Respectfully, WALTER ELDER.

Phila. Aug. 24, 1853.

We couldn't think of being so disrespectful—we received the flowers, they were very good blooms. Would it not be advisable to shade the *Laurestinus* while in bloom to prevent the sun burning the flowers?

Judging from the preparations being made, the annual exhibitions of the New York and Philadelphia Horticultural Societies, will this year surpass any former ones. In New York they have chosen a new place for holding their show, Niblo's garden—and their committee are doing all in their power to have a good collection of flowers and fruit. The crowd attracted by the Crystal Palace will be an inducement to them to endeavour to make as good a show as possible and we hope that their endeavours will be crowned with success. The exhibitions of the Pennsylvania Society have always been successful ones in a greater or less degree. We cannot hope to have such large collections of fruit as were brought last year by the Pomological Society, still we will have enough. The plant room will as usual present a brilliant display; but we may venture to hope that the rare plants may be more visible than formerly. The crowding together the collections to pro-

duce the best effect puts out of view many rare and valuable plants—on the other hand setting each collection by itself, would make the small ones look meagre in comparison;—a table or portion of the room set apart for novelties or for specimen plants would be preferable;—at the triennial exhibition at Ghent, the collections are placed together and premiums awarded by the committees, after that they are arranged on the stages, and the public admitted—another thing which should be imitated in this country—all awards should be made before the exhibition opens.

The New Rose "*Souvenir de la Reine des Belges*," from evidences collected by Mr. Van Houtte, seems to be identical with the Rose "*Prince Albert*," Mr. Laffay, says in a letter to him.

I received this rose in November, 1851. * * * * From its arrival I thought I recognised the wood of this plant; it resembles very much that of one of my seedlings, the *Prince Albert*. The specimens which I received as well as the grafts which I took from them, only furnished me with individuals entirely like this last rose, as well in the structure of their branches as in their leaves; the buds, calices, and flowers varying in colour, according to the season from a clear red to a shaded and velvety violet. In fine, sir, I have not grafted a single branch for next year, being persuaded that this variety is produced by an error.

The New York Horticultural Society are making arrangements for their Fall Exhibition, which we hope will be worthy of the occasion. We annex the circular of the committee :

THE FALL EXHIBITION OF THE NEW YORK HORTICULTURAL SOCIETY will be held at Niblo's Garden, corner of Broadway and Prince Street, New York City, on Tuesday, Wednesday, and Thursday, September 20th, 21st, and 22nd, 1853, to which the undersigned earnestly solicit your attention. The Crystal Palace will doubtless attract large numbers of persons, not only from all parts of the Union, but also from various countries of Europe, and the undersigned therefore propose to put forth unusual efforts to get up a Horticultural Exhibition which shall be worthy of the great commercial metropolis. The fact of a large number of Europeans congregating in New York, will give our next Exhibition something more than a local interest; for they will expect to see in the first City in the Union, a fair exposition of what we are doing in the United States for Horticultural Science, and will judge us accordingly. It is very important, then, that their minds should be favorably impressed. The undersigned confess to feeling something more

than a local pride in this matter; something akin to what has been happily called *amor patriæ*, and they trust that this feeling will meet with a ready and hearty response in every section of the country. The undersigned believe that the material exists for getting up a grand general Exhibition, and they know that there is abundant material in the country for making a display of Fruit, which cannot be surpassed, if equalled, in any City of Europe. It is only the *spirit* that is wanting; how sadly wanting here in New York. This is a subject which eminently concerns the public taste and the public good, and all should feel some interest in it, no matter where their home, or what their pursuits in life may be. It is thus that we appeal to you for your active aid and co-operation. If you have no Fruits, Plants; or Flowers to send yourself, perhaps your neighbor has, and a word from you may induce him to send. It is conceived that our List of Awards is very liberal and worthy of attention; but in order to afford every reasonable inducement to exhibitors, the undersigned will pay freight on all articles sent from a distance, when requested to do so. Communications should be addressed to the Chairman of the Committee, Bible House, Astor Place, New York.

PETER B. MEAD,
and others; Committee of Arrangement.

We copy in this number, an article on Underdraining from the *Genesee Farmer*, a paper which we consider as one of the most valuable of our exchanges. It is published monthly, at Rochester, N. Y., at the very low price of 50 cents a year.

The Southern Agriculturist, a monthly journal, devoted to the science and practice of agriculture, &c., is published at Laurensville, S. C. The contents are excellent, and the getting up of the paper is very creditable.

We are happy to announce the commencement of an agricultural journal at Burlington, Iowa. The Iowa Farmer and Horticulturist, Edited by Messrs. J. W. Grimes and J. F. Tallant, has reached its fourth number.

ANSWERS TO CORRESPONDENTS.—J. McD. Your pink flower is *Sabbatia chloroides*, the orchid is *Platanthera (Habenaria) ciliaris*.

D. B., Utica—You should have sent entire fronds, we cannot judge from the pinnæ—No. 3, is *Asplenium acrostichoides*, No. 6 and 8 are *Asplenium*—No. 7, *Aspidium asplenoides*—No. 9, *Onoclea sensibilis*—No. 10, a *Botrychium*, the rest we cannot identify without larger specimens. As for books for general botany we would recommend Gray's Botany of the Northern U. S. Presl is the best authority in Ferns.



VERBENA.. var. Princesse Marianne.
(Boucharlat.)

TIME : 11:00 AM
AND MONTH : JANUARY 1964

Vol. III

VERLENA PR 11-11-61 11:11 AM

Deprived of descriptions of the species, we are unable to know how to share this information with the members of the stocks of the group of related species. This is a serious problem, since it would seem to require that the *Verbeekia* species *viridula*, Jess. (i. M. 1853, p. 103, fig. 184) a species of the group as of La Plata, when it is not the same as the *Verbeekia* of 1828. But M. DeCandolle is not a specialist in the

And in this world, no
 and with distinction.

res. CHEMIST, U.S. DEPT. OF COMMERCE, BUREAU OF MINES,
t. 2918, and *loc.*

vast pumps of oil, which were first installed in 1886, to pump the oil to the surface.

2. Problem 1) reads the same as Problem 2) in the previous version.

tween bright red and black. The color of the surface of the fruit in the variety is due to the red color of the skin of the fruit.

cases. But in the present case, as we have seen, the effect of forming the composite is to make the two cases *more* similar, rather than less.

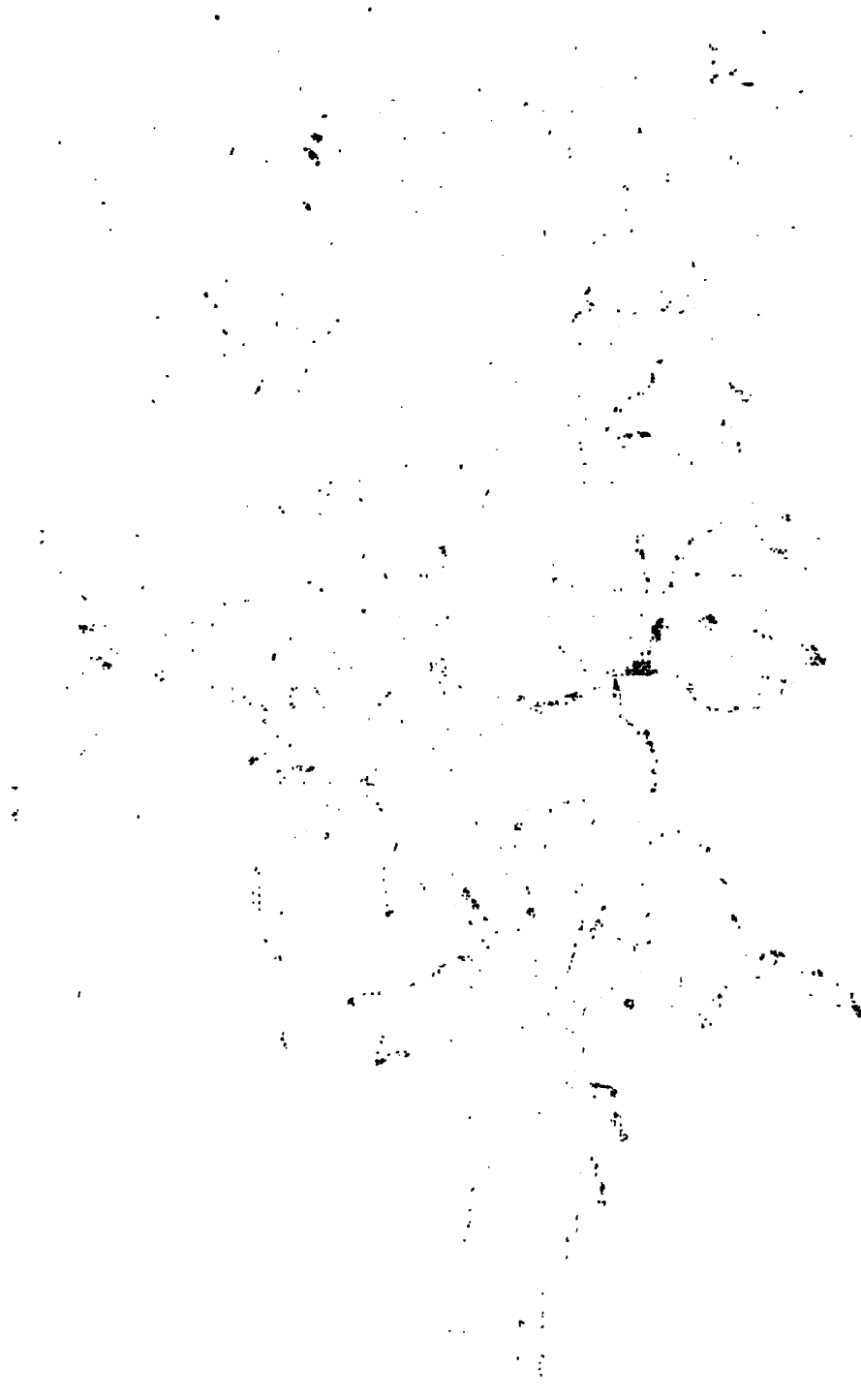
At the first of them

that to this impact there is no response

and that there is

to give it success, it is necessary to have a high quality of personnel, both in the field and in the laboratory. Such

tion on the rate at which the system can respond to changes in the input data. The delay time is defined as the time interval between the instant when the input data change and the instant when the output data begin to reflect the change.



Val van Finsesse Molante
1900-1910

THE FLORIST

AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, October, 1853.

[No. 10.]

VERBENA PRINCESSE MARIANNE, BOUCHARLAT.

Deprived of descriptive notices and of specimens, we do not know how to place this beautiful variety in one of the four primitive stocks of the group of *Verbena Melindres*. By its leaves and inflorescence it would seem to be derived from the *Verbena chamaedrifolia*, Juss. (*V. Melindres*, Bot. REG. t. 1184) a species of the pampas of La Plata, which flowered for the first time in England in 1828. But M. Decaisne assures us, resting on the authority of M. Vilmorin, this would never have varied from the brilliant vermilion-red which distinguishes its flowers. There remain the *V. phlogiflora*, CHAMISS, (*V. Tweediana*, Bot. MAG. t. 3541,) *incisa*, Bot. MAG. t. 3628, and *teucroides*, Bot. MAG. t. 3694, also introduced from the vast pampas of the La Plata, and which flowered in Scotland, the two first in 1836, the last in 1838. It is especially to *V. phlogiflora* that in the monograph of the Verbenaceæ, M. Schauer (in D. C. Prodr.) refers the greater part of the varieties of all shades between bright red and bluish. Perhaps it is into this category that the variety here figured, by its white flowers with large lilac star, enters. But in this respect, as we have said, the means of forming an opinion are wanting. Whatever may be its origin, the plant recommends itself among all others by the singularity of its flowers. At first sight many persons would take it for a *Phlox*, they will see that to this mystifying resemblance to *Phlox Princesse Marianne* it owes its name, and this proper and picturesque name is of a nature to give it success. Already, the first prize of the quinquennial and general exhibition at Lyons, held the 15th of September, 1851, has proven the rare merit of this acquisition of M. Boucharlat, and without doubt the plant would have already ornamented parterres, if the

desire of proving well the persistence of such remarkable characters, had not delayed its sending out: reassured on this last point by the experience of three consecutive seasons, M. Botcharlat has just issued it. L. VH.

HELIOTROPE.

Many varieties of the above have been introduced to cultivation within the last few years, but taking all things into consideration there is perhaps none more desirable than the old well known *H. Peruvianum*, a universal favorite on account of its delicious fragrance, which, combined with its free growth and profuseness of bloom, makes it a very desirable plant for furnishing bouquets during the winter months. By keeping up a succession of healthy young plants, flowers may be obtained at all seasons, with the aid of a warm greenhouse in cold weather. As a plant for the flower beds during summer, it grows luxuriantly, provided the soil is moderately enriched. It is however, very susceptible of cold, and will show the effects of a slight frost sooner than almost any other shrubby flower garden plant. It is indeed an easily managed plant, cuttings of it will strike root at any season, and grow in any ordinary garden soil. To secure plants of sufficient strength to flower during early winter, cuttings should be inserted in June. They will form roots in two or three weeks at this season, if inserted in a shaded situation; they should be immediately placed in small pots, and when these are filled with roots, shifted into flowering pots; eight inch pots will be sufficient in size. They now require to be grown in a situation fully exposed to the sun, and if the pots are plunged to their rims, less water will be required and the plants otherwise benefitted. The roots of plants in pots fully exposed to the action of the sun and atmosphere are very liable to sustain injury. A few hours' neglect in watering will counteract the progress of weeks. The young incipient points of roots are so easily destroyed that nothing short of the most vigilant attention can keep plants in a vigorous state when the pots are thus exposed. Hence the necessity of plunging the pots that evaporation from their outer surfaces may be prevented. This is more especially necessary with

pots of a soft or porous character. Hard burned pots are condemned by many, for what reason I do not know. So far as my experience goes I decidedly prefer pots glazed on the outside, both on account of the benefit they confer on the plant, and their freedom from becoming green and unsightly when placed in a warm, humid atmosphere. This latter circumstance alone is worthy of consideration.

When the plants are removed into the greenhouse, they should be placed in the warmest position, near the light, in order to flower them freely. Plants that have been growing in the flower beds during summer, lifted and potted before frost, will commence blooming in early spring. As a permanent climbing plant for a greenhouse or conservatory it is worthy of notice. When once properly established in such a position it will keep in flower during the year, and speedily cover a large surface if allowed sufficient root accommodation.

DELTA.

THE SARRACENIA.

My opinion having been asked concerning the identity of the species of *Sarracenia* called *undulata* by M. Decaisne,* when compared with the *S. Drummondii* of Croom, I cannot hesitate to pronounce at once that the two supposed species are without doubt the same. The *S. Drummondii* grows common enough in the savannas of Alabama and West Florida, and differs in nothing from the specimen described as *undulata*, except in having the upper portion of the operculum of the leaves, which is sometimes lengthened out, more or less rounded. As I have seen the flower of this plant, it is of a most brilliant red color, the same as that of the *Amaryllis formosissima*, the true purple of the Romans and of Linne. I presume that Mr. Croom's figure in the 4th volume of the *Annals of the Lyceum of New York*, was taken from a dried and faded specimen, which accounts for the dull color of the petals and the peculiar form of the operculum.

I add some remarks on the other species of this genus.

I have seen the *purpurea* in the lower country of Georgia. As I

* In the *Flore des Serres*, vol. vii. page 267.

am acquainted with it, it has always been growing in bogs, a kind of soil unknown in the sub-maritime regions of our Southern States. How far north it extends there are no means of ascertaining; it has been seen in the southern portions of the Labrador coast. The other species are all confined to the Southern States. The *flava* is more abundant in the middle parts of North Carolina. In the neighborhood of Fayetteville it covers the ground in immense profusion; and flowering at the same time and intermixed with the splendid *Iris tripetala* has a most beautiful effect.

The *rubra* first appears a little farther south, but it is by no means common. The *variolaris* is confined to a distance of about 30 miles from the sea shore, in South Carolina and Georgia, in moist pine forests.

As for the *Catesbaei* of Elliott, it is quite a distinct species, and as far as I know it only grows in those parts of the country pointed out by the author from whom it received its name. It has lately been thought proper to erase this species from our Flora, but whatever errors Mr. Elliott may have committed in other instances, in this he was certainly right. It is too much the custom with naturalists to pronounce opinions on objects described by others which they have never seen; I have myself much to complain of in this respect, and may at some future time take occasion to notice what I have suffered from the whims of others.

With all these species of *Sarracenia* I was once very familiar, and their forms and peculiarities have not left my memory; for years they were always before my eyes, and their distinctive characters indelibly impressed upon my mind.

The locality of the *psittacina* with which I am acquainted is the immense pine forest to the south west of the Altamaha, between that river and Florida.

A word or two about the cultivation of these highly ornamental plants: they should be planted in a mixture of black vegetable earth, such as is procured from the crevices of rocks, and white sand, in equal quantities, with a small quantity of powdered charcoal. They require to be profusely watered. J. LC.

MANAGEMENT OF CIDER APPLE TREES.

A practical treatise on the rearing and cultivation of Cider Apple Trees, in Normandy, entitled "*Traite pratique de l'Education et de la Culture du Pommier a Cidre, dans les Departements de l'Ancienne Normandie*," has been lately published by the *Cercle pratique d'Horticulture et de Botanique* of the department of the Seine-Inferieure. It contains, as we observed some weeks ago, concise instructions on the subject; and convinced that the work has a very useful tendency, we have thought it desirable to furnish our readers with a series of translations from it.

The subject is by no means unimportant. In proof of this it is only necessary to adduce the facts, that in the cider counties, in a good season many farmers clear their rents entirely by the produce of their cider trees; and hence new plantations of these are being extensively made. The strictures in the first part of the treatise in question may prevent errors in the formation of these plantations; and it will be seen, when pointed out, that many errors are as easily avoided as practised. We may add, that many of the strictures as well as the instructions that follow are applicable not only to cider apple trees, but likewise to other trees.

PART I.

Critical remarks on various modes of cultivation which have been adopted, and are still practised as regards the Cider Apple Tree.

Formation of a Nursery.—When a private nursery is formed for supplying plants for an orchard, it is frequently established in a very bad situation, such as the corner of a yard surrounded with Quick-hedges in which there are large trees; or even in a narrow space between the back of a building and a hedge, with the view of getting shelter, or for the sake of economy of enclosure. To save the small cost of one or two pieces of fence, a great portion of the plants is lost, because some are drawn up by the shade of buildings or of trees, and others cannot thrive on account of the ground being continually impoverished by the roots of the hedges and of the large trees which usually grow in those hedges.

Choice of the Plants.—A false economy often causes second or third rate plants to be selected because of their cheapness. This is a mistake; for although plants of the second picking are not altogether to be despised, and although occasionally some plants may be found from among them that become as good trees as those from the first; yet it cannot be denied, that of two plants of the same age, grown in the same soil, and having received the same care, but which are of different vigor, the tallest and thickest should be preferred.

Preparation of the Plant.—To prevent the apple trees from becoming tap-rooted, many prune the roots to half their length, and thus almost make cuttings of their plants, the starting of which becomes more difficult, slower, and less perfect than would be the case if the roots were preserved.

Distance usually left between the Plants.—It is an error to suppose that the more plants we put in a given space, the more trees really deserving the name of such, we shall have. The apple tree, which should remain from seven to ten years in the nursery, in order to acquire the necessary strength for being finally planted, requires a great deal of air and light to develop its stem and head, and a sufficient extent of ground to allow it to form good roots. In a nursery where the plants are too close together, as, for example, 2 feet between the rows and 12 to 15 inches between the plants in the rows, we often obtain only badly rooted trees with slender drawn-up stems, no thicker at bottom than at top; or, as is most frequently the case, some trees more vigorous than the rest get the ascendancy, and stop the growth of their neighbors, which they eventually annihilate. In this case, he who has planted 1000 plants is fortunate if he get 500 or 600 trees, we do not say very good ones, but merely passable.

Rearing the Plants and forming the Stem.—If a straight stem is not indispensable to the formation of a good bearing apple tree, it is at least necessary for new plantations in straight rows; and in all cases it is more eligible. Now, to obtain straight stems requires yearly attention to pruning, pinching off, and bending to a right position, &c. These operations should be skilfully performed; but such is rarely the case. In nurseries which are not totally neglected, the shoots which come on the stem are all taken off, and that generally at too early a period. As these shoots, or more strictly speaking their leaves, were intended to increase the size of the stem, the premature destruction of the shoots, and the consequent privation of leaves, prevent robust, straight growth, and thence come those trees that have bending, weakly stems, and which are more especially too slender at the base.

Neglect of matters relating to Grafts.—Cleft grafting, although most used, has several defects. In order to perform the operation, the stem must be cleft from side to side, and this cleft is a chasm which the sap cannot close up in a single year. By neglecting to keep it constantly covered, the introduction of water is permitted, decay of the wood follows, and this, continually spreading towards the interior, shortens the life of the tree, and renders it more liable to be broken or uprooted by high winds, because the rottenness extends to the large roots, which, from that cause, cannot offer any resistance. Grafts are often broken by the wind, or by large birds. This is another result of negligence in the grafters, who should always protect the grafts by fastening to the stock, with osier, a rod to which the young shoots from the graft could be secured as they proceed in growth.

Formation of the Head of the Tree.—Whether the tree has been grafted low or high, its stem should be stopped at a convenient height for the growth of the branches intended to form its head; but, instead of keeping these branches at a proper distance from each other, and only retaining a small number, and allowing them to grow to a good length, the branches are all preserved and cut very short at the end of every winter, without calculation, without forethought, and without the direction of the bud which has been pruned on having been examined.

The consequence of this improper mode of pruning is, that, after three or four years the head of the apple tree is a shapeless bush, the numerous and widely-ramified branches of which would hardly afford a passage for a cat, although at a later period a man must pass among them. It would be better to allow the trees to push freely, without employing the pruning knife at all upon them, than to exhaust them in this manner, by inducing them to make a number of shoots, most of which must be entirely cut off next year; for the inevitable result of this bad pruning, besides exhaustion, is to necessitate the amputation of strong branches with the saw which should have been cut off with the pruning knife when first developed; from these amputations with the former instrument large wounds result, which only heal slowly and imperfectly; and the decay of the wood arising from wounds not healed will eventually produce the same effects as the neglected clefts of grafts.

Taking up young Trees from the Nurseries.—We would gladly have said that the apple trees are *taken up* from the nursery, but as their roots are very often cut short by the spade, or by strokes of the mattock; or, having been slightly uncovered, they are drawn violently out, so as to break all the fibres, &c., that are twisted, we are obliged to say that they are *torn up*.

Again, the plants are often left exposed to the air, which dries the fibres, if any remain; or to rain, which washes them; or sometimes, even, to the destructive influence of frost. Yet it does not require much science to know that roots intended to live and grow in the earth only, must suffer by exposure to the air, to light, and to frost; and that they should remain exposed to these influences as short a time as possible.

The preservation of the leaves on the tree, if it has been transplanted at a time when they are still in a tolerably fresh state, such as the beginning of November, likewise affects the success of the operation. At the before-mentioned period, although the leaves may only remain on the branches for a single day, the death of the small roots will be the result; because, as the leaves, from the effects of light, continue to absorb the sap contained in the tree, which latter can draw up no more nourishment from the soil, they consequently dry up all the young and tender parts, such as the spongioles and the recent shoots. It is, therefore, of the utmost importance to take off the leaves, if there are any, at the time when we transplant.

Preparation of the Trees and Soil for Planting.—We should never hesitate about thorough trenching and making deep holes before planting. The rapid growth of the trees will amply repay the expense. The preparation of the soil is commonly performed tolerably well, but as much cannot be said of that of the roots. Planters are often seen shortening the roots of a tree as if they could make use of the portions cut off; they call that trimming the root. Some, more careful, allow the roots to remain at full length; but there are many who, instead of spreading them out as the hole is being filled up, content themselves with throwing in the soil and treading it when the roots have been sufficiently covered. In consequence of this the flexible roots take a bad direction, by reason of the weight of the earth, and they are frequently squeezed into bundles, in which the weakest ones become hot, moist and rotten.

Another bad practice should be pointed out. It consists in introducing the earth among the roots by means of a pointed stake. Many old planters would think they planted badly if, whilst holding the tree in one hand, they had not a well-pointed stake in the other; with this they make many thrusts through the earth that is thrown on the roots, severely bruising the latter and making many excoriations. A stake is only used in the case of large trees which cannot be shaken, and the roots of which are too large to be lifted and directed by hand. When the stake is used, care should be taken not to injure the roots between which it is introduced.

When apple trees are finally planted they no longer require what are called the attentions of rearing; other operations, however, become necessary; but too frequently neglects and accidents await them.—*Gard. Chron.*

[To be continued.]

CULTIVATION OF THE EUROPEAN GRAPE IN AMERICA.

Houston, Texas, Sept. 27, 1852.

I cannot refrain from tendering some information to your paper, and, if agreeable, my best services with reference to your suggestions as to the grafting of European Vines on robust American stocks in your number of the 21st ult. (see p. 531, 1852.) In this neighborhood an opinion prevails that the European Grape cannot under any circumstances be successfully cultivated, but this opinion I hope to find erroneous, inasmuch as I believe it to be founded in entire ignorance of the soil in which it delights, and on an impression that the climate and soil of this country can work impossibilities, and that pruning, and other means of husbanding the energies of a plant are here perfectly unnecessary. In this locality a native Grape known as the Mustang, or wild Grape, grows with extreme luxuriance, both on the sandy banks of streams and the heavy alluvial soil of the prairies; and at

though it does not attain in this neighborhood to so large a size as it does on the Brazos, it is still to be met with from 6 to 9 inches in diameter, over-topping the highest trees, and bearing an enormous quantity of fruit, worthless for the table, but good as I have proved for wine. On the Brazos, six weeks since, the woods were stated to be perfectly blue in appearance from the immense quantity of fruit which had ripened, even under the shade of a dense foliage. It is entirely free from mildew, and to prevent its appearance on European varieties, and to secure a luxuriant growth, I intend in the coming season to make use of it largely as a stock, for I have proved that it unites most freely with the scion, so much so that a cutting of this year's wood attached to a Mustang stock during the last week of May, had in a period of from 50 to 60 days not only taken, but had been followed up by such a vigorous growth that I counted 37 joints from the point of insertion. The following statement on this same subject by a Mr. Lincicum, appeared a few weeks since in the *Galveston Journal*:—"We have in our highly favored country many delicious, healthy, indigenous fruits, particularly in the Grape family, many of which are of fine flavor, and quite large, bear cultivation well, and might be made with small expense a source of much wealth and comfort. Our native Grape will flourish well almost without attention; all that is necessary is sufficient space and protection from cattle. But the foreign varieties, on their own roots, do not thrive well in our black and limy soil. They become diseased and die out in a few years. Amongst these are many varieties very delicious and suitable for the table. These varieties are available notwithstanding their want of thrift in the prairie soil, by a very cheap and simple process. In my experiments the following has resulted very favorably. Take a healthy cutting from the last year's growth, from the kind of Grape vine you wish to propagate, and by the common wedge process, engraft it on a thrifty Mustang grape vine. The wedge graft is so simple that a description of the process may be considered superfluous. However, any time between the 10th and 20th of February, prepare your grafts, having two or three buds on each slip, cut the upper ends even and smooth, and the lower ends into a true wedge—your knife should be sharp—then cut off the top of your stock Vine, within 2 or 3 inches of its root, split it down through the centre, low enough to receive the wedge of your graft, push in your wedge on one side of the stock, sap to sap, and downwards until the cut of the knife on the graft disappears. You may insert two grafts in the same stock if it is large enough. Then wrap a strip of wet domestic carefully around all, with sufficient firmness to hold the graft in its place; after which raise the earth around it so as to cover the stock, leaving the buds of the graft only above ground. I have, however, inserted grafts 3 feet above ground and they grew very well, but

they require more protection and are more liable to be shaken out of place. The above is the process of engrafting to the Mustang Vines that may be found already growing about your premises. I have two grafts which I inserted into thrifty Mustang stocks on the 15th of last February; they have each run over 200 feet already, and are still growing rapidly. One of these grafts put forth a cluster 7 inches long, and matured 98 large Grapes. They are a bright red, transparent Grape, very rich and delicious; they were brought to this country I think by the Germans. I have another graft of the Black Sweetwater Grape, which, at the expiration of 17 months from the time I inserted it into the Mustang Vine, had matured half a bushel of fine large Grapes, much better flavored as I think than when growing on their own roots. When it is desired to have them grow where there are no Mustang roots, as in the regular form of a vineyard, it is easily effected by selecting from the woods as many thrifty young Mustang Vines as you like; having them as large as your finger with good roots, top them off to about 12 inches, carry them to your lot, insert and wrap your grafts properly, and then plant them in such manner as to let your graft buds rise just above the surface of the ground at the desired point in your vineyard. The hole in which they are planted should be large and pretty well supplied with manure, fully rotted. Rotten logs or other decomposed vegetable matter is best. The Mustang Vine will, however, flourish very well in almost any kind of soil. It is a strong hardy Vine, and will live to a great age. Grafts from the good varieties growing on healthy Mustang roots will after the fourth year if properly dressed and cared for produce from 10 to 15 bushels of clusters apiece. Twenty such Vines would supply the wants of a large family. They will bear abundantly the second year, but that injures the Vines, and the greater part of the clusters should be clipped off. They may on the third year, be permitted to mature half their clusters—one to each fruit-bearing joint. There is no actual necessity for putting up expensive frames for the Vines to run upon. Any kind of a stake sufficiently strong and durable to support the Vine during the time of its fruiting is good enough. It is best for the Vines to fall and remain on the ground through the winter. Then, about the middle of February, or before the sap begins to run, prune your Vines, stick up your stakes at the proper places to receive the branches, and with the ravelling of cotton bagging tie the branches to the stakes. A yard of bagging will tie up 500 Vines. Now, all this is so simple, so cheap, and so easily done, that three or four years hence there will be no plausible excuse for the man who has no Grapes on his table—when I pay him a visit.”—J. H. S. STANLEY.

Gard. Chron.

CALENDAR OF OPERATIONS.

OCTOBER.

FLOWER GARDEN.

Continue to plant deciduous trees at every opportunity. Whether spring or fall planting has the greatest advantages is swallowed up in the fact that "we shall find enough work for the spring." Hardy annuals of many descriptions will not flower next season unless sown now; especially Larkspurs, Ipomopsis, &c., and all bloom the stronger from being sown now. They can readily be transplanted early in spring to where they are to remain.

Bulbs that are easily affected by frost, as Gladioluses, Tuberoses, and Tigridias, should be taken up early and dried slowly in a secure place. Hyacinths, Anemones, and similar plants for spring flowering, should be planted out as soon as they can be obtained. The latter may be put out an inch or so below the surface, and be protected during the winter with a slight covering of leaves; well decayed cowdung is an excellent manure for them. See that the Dahlias are true to their names before the frost destroys their flowers; after which take them up, dry them slightly for a few days, then stow them away loosely in any cool place just secure from frost. If they rot in winter it will be either through getting too warm and damp, or too dry and frosted. Wherever alterations and improvements are to be effected, get as much as possible carried out before winter. Look on the fall as if it were the real beginning of spring work. Laying of turf may be well proceeded with; box edgings, though, are best deferred, as their beauty is very frequently sadly defaced by frost.

GREEN HOUSE.

The tenderest plants being housed last month, the remaining will require immediate attention. After housing, the object should be to rest them, the temperature not being suffered to fall below 38°; they will be the better for all the air that can be afforded them. No more water need be given for a month than will barely keep them from flagging. Pelargoniums, Cinerarias, and similar things which *will* keep growing, should be kept as near the air or glass as possible—the latter, if full of roots, and desired for large, handsome specimens, will require potting about the end of the month into coarse turfy loam, with about a third of half rotted stable manure. Roses in pots, for early flowering, may be repotted as they are brought in; if they require it; coarse soil is essential to their perfection—a close, compact soil will not grow them well; they should have the lightest part of the house. Many thin the buds of their Camellias as they bring them in doors; I prefer waiting for a time, as the slight change they necessarily experience by the move often causes some to fall. As mignonette grows, pinch out the top of the shoots.

occasionally, it will make them bushy, handsome specimens, and prolong their flowering period. The same may be said of any other ornamental annual cultivated this way. A few plants of Petunias and Verbenas potted now, and also kept pinched in at every joint, make objects of the prettiest class by the spring. Plants of every kind kept in view for winter flowering will require continual care in repotting, watering and staking. It is often desirable to have a few Azaleas and Rhododendrons in flower early; any plants selected for this purpose should have even more care bestowed on them in getting their wood well ripened by free exposure to sun and air than even the others. Chinese Primroses for early flowering will also require repotting; it is very fond of coarse leaf mould with the soil in which it is growing. Auriculas, the prettiest of spring's blooming plants, are frequently lost in the winter; yet they are very hardy, they require to be kept from damp and bright sunlight. Chrysanthemums will soon be the chief ornament of our houses. If encouraged at this time by occasional doses of liquid manure their flowers will be finer. If seed is desired from them, let them flower in a cool, light situation, where they can get abundance of air without getting frosted. Cuttings of all kinds will continue to receive attention, and those rooted be successively removed to single pots. Before the weather becomes severe a stock of turfy loam, leaf mould, rotten stable dung and sand should be housed so as to have it at command whenever potting is required. Different combinations of the above materials will afford composts for nearly all kinds of plants.

VEGETABLE GARDEN.

Celery as it grows will require earthing up, and Endive successively blanched; but the main business of the month will be preparations for housing the root crops for the winter. Beets are generally the first thing attended to, they being the most easily injured by frost; Carrots, Salsafy and Parsneps following. The latter are never really good until they have been well frozen; and many leave them entirely in the ground, taking them up as wanted for use. I prefer taking them all up and packing them in sand or half dried loam, in a shed or cellar, which can be kept just above freezing point; yet the cooler the better. If suffered to be in heaps they heat and soon rot. In the same situation Endive and Cape Brocoli may be preserved to the end of the year—they are taken up with a small quantity of earth adhering to them, and placed side-by-side together. Tomatoes, if dug up also, and suspended, roots upward, in such a situation, will keep good along time; but this must be done before the least frost has touched them. It is a wise plan to sow a little more Early York Cabbage early in the month, as in fine mild winters the September sowing grows too forward when protected. A very slight protection is better for them than any elaborate affair, the sun

principally injuring them. The same remarks apply to lettuce intended to be kept over winter for spring use, though the sun is less destructive to them than to the cabbage.

Forcing vegetables, wherever the least command of heat can be had, is the most interesting and useful part of gardening. It is not by any means what it is often considered, an operation by which you pay a dollar for every mouthful. The Asparagus, Sea Kale, Lettuce, Radish and Cauliflower can be had for months earlier than in the open ground, wherever a regular temperature of 55° can be obtained, with, of course, the proper amount of air, moisture, &c. Asparagus can be had under a greenhouse stage, though of course the tops will not be so green, nor will it be much else but indifferent under such circumstances, as it would be in the full light.

Radishes require an abundance of air, and Lettuce light. Cauliflowers, if kept for some months with all the light and air possible, at a temperature of 50 or 55° , may have it gradually raised to 60 or 65 , and even 70° , and thus come into use in February, when there is no vegetable more desirable.

Cucumbers, Tomatoes and Beans require a temperature of at least 65° to begin with. If a temperature of 70 can be maintained in the coldest weather, a few of these might be sown by the end of the month, which will produce some very acceptable dishes about New Year's day. Rhubarb, if carefully taken up at the fall of the leaf and potted, or put into boxes, will also come forward well if put under the stage in a house of the last temperature.

T. J.

FRUIT.

PEAR TREES ON QUINCE.—This method of Pear cultivation is rapidly increasing and gaining in public estimation, although there is still much opposition to its introduction. No doubt failures will occur, but a few isolated cases are not to be taken as conclusive proof either for or against any system. It may serve a good purpose to note some of the reasons we have lately heard advanced against the above, or rather show the circumstances which led to its being unprofitable. In one case lately examined the trees were dying out by degrees, whole limbs suddenly withering and drooping, occasioning much trouble and anxiety as to their ultimate fate. The unsuitableness of the stock was the supposed cause of failure, and this conclusion had been arrived at in the face of evident facts to the contrary. The soil was a thin, gravelly clay, resting on a hard clayey subsoil; when wet it became so soft and yielding that trees could with difficulty be kept upright in it when in this condition. The retentive sub-soil preventing the downward escape of water; in fact, holding it like a basin, until it was again dried to solidity by surface evaporation—conditions evident to the most casual observer quite opposed to favorable growth. The “evident facts to the contrary” were apparent in the

healthy state of those planted in more favorable soil, which accidentally happened in grading the surface to that exact level insisted upon by many in their garden improvements.

Carelessness in planting is also productive of future annoyance; the tree should be planted so that the stock may be just covered with the soil. If planted higher, the quince will in some cases get *hide bound*, and not swell sufficient for the graft. It also prevents the borer from committing his ravages upon the stock, which would otherwise most likely occur. We do not advise deep planting in any case, but the quince throws out roots so readily that little fear need be entertained of not having plenty of fibres near the surface. Indeed, the facility with which it roots is a very forcible point in favor of the quince over any other stock that can be employed.

But the greatest general cause of failure arises from bad cultivation. In the first place, there should be no stagnated water in the soil; then it should be trenched and loosened before planting, and the trees receive an annual top dressing of manure in the fall, to be forked in about the trees in spring, the soil kept constantly loose and friable by breaking up the surface crust after heavy rains. An application of charcoal dust has been found useful on soils of a clayey nature, preserving them from consolidation and increasing their absorbent capabilities. Attention to these points, in conjunction with proper pruning and pinching will leave no cause for complaint in this method of pear cultivation.

PRUNING.—This operation, it is gratifying to observe, is becoming more generally understood than formerly. Much has been and will be said and written upon the subject; the general principle may be summed up in a few words. A puny, weak growing tree should be encouraged by every available means during its growth; not a leaf removed, if possible, until they cease to perform their functions in the fall; then prune it closely down, this will induce a vigorous growth the following season. On the other hand, a thrifty, strong growing tree should be pruned in summer, and the growth so reduced as to admit of little or no removal of wood in winter. The effects and physiological reasons for these practices having been dwelt upon at some length in previous calendars, it is deemed unnecessary to make further allusion to the subject at present.

STRAWBERRIES, in pots, will require to be set widely apart, in a situation fully exposed to the sun, in order to mature their fruit buds. Towards the end of the month provision should be made for keeping them dry, either by placing them in a glass protected frame, or by piling them on their sides in ridge form. The latter method is simple and efficient. The pots are laid on their sides commencing with two rows about thirty inches apart, laying them bottom inwards; the intermediate space is then filled up with leaves or tan, a second layer of pots is then placed on top in the same manner, keep-

ing them a few inches further back than the first, and fill up to their level as before. This is continued until the pots meet at top. A wide board will afford sufficient coping to throw off heavy rain. In severe frosts mats of loose straw will serve to protect them from injury.

This is a favorable season for manuring and renewing the soil under old and sickly trees. There is no better material for this purpose than well rotted manure forked deeply and plentifully among the roots. Grapes on arbors that appear weak should be similarly treated, and some of the old shoots *laid* and covered with soil. These in time will emit roots near the surface, which will impart additional vigor to the plant. Gooseberry and Currant bushes should also receive attention, the soil forked over and left rough and open, the better to expose the larvæ of insects, which by this means are destroyed in cold weather. Raspberries should be thinned out, properly secured, and manured heavily if you wish superior fruit. Want of proper care in cultivation, is the frequent cause of resorting to expedients which have to be employed as a means of counteracting defective management. S.B.

NEW YORK HORTICULTURAL SOCIETY.

The regular fall show of flowers, fruit and vegetables, under the auspices of the New York Horticultural Society, opened on the 20th, September, at Niblo's Garden. The concert room has been devoted to this exhibition.—Side tables, ranged along each side and end of the beautiful saloon, were decked with the choicest flowers, the most delicious fruit, and the most ponderous specimens of vegetables that the gardener's art can manage to raise. In the centre of the room were some half dozen round tables, bearing hot-house plants, bouquets, baskets of flowers, &c., regaling at once the senses of sight and smell, and indicating the refined taste which devotes itself so successfully to this branch of horticulture. The exhibition, though perhaps not so large as on former occasions, bears the palm over them by the excellent quality of the articles. It would be at once a difficult and a needless task to enumerate the beautiful varieties of fruits and flowers which were exhibited. The dahlias were in endless and many-colored variety, and there were some beautiful specimens of fuchsias and verbenas. The grapes and pears are also peculiarly excellent. We would suggest, however, to exhibitors, the propriety of a more strict and general compliance with the following rule:

As a large number of persons visit our exhibitions to learn the names of plants for future use, it is requested that the botanical and common name (of plants, &c.) be distinctly written on the same label.

An address was delivered by the Rev. Mr. Chapin, on the beauties and use

of Horticulture. The judges or committees on fruit, vegetables and flowers awarded the following prizes:

FRUIT.

APPLES—For the best collection of named varieties, silver cup, or \$10—Mr. Bailey, Plattsburg.

For the second best, silver medal, or \$5, Mr. L. C. Lighthiise, Orange, N. Jersey.

For the best six named varieties of table apples, silver medal, or \$5, H'y Thacker, Oneida Community, Madison county.

PEARS—For the best collection of named varieties, silver cup, or \$10, C. M. Hovey & Co., Boston.

For 2nd best, silver medal, or \$5, John Brill, N. J.

For the best six named varieties of table pears, silver medal, or \$5, Alex. Gordon, gardener to E. Hoyt, Astoria.

For the second best, bronze medal, or \$3, Mr. Grant, gr. to Mr. Vandeventer, Astoria.

PLUMS—For the best three named varieties, silver medal, or \$5, Henry Thacker, Oneida co. N. Y.

QUINCES—For the best twelve quinces, bronze medal, or \$30, Jno. White, gardener to Gov. Morris.

GRAPES—For the best six named varieties foreign grapes, silver cup, or \$15, J. Daillidaze, gr. to Robert Renny, Lodi, N. J.

For the second best, silver cup, or \$10, J. McMillan, gr. to Fran. Morris, Throgg's Neck.

For the best three named varieties, silver cup, or \$10, J. Daillidaze.

For the second best, silver medal, or \$5, Thos. Sprunt, gardener to J. D. Wolfe, Throgg's Neck.

For the best bunch of black Hamburgs, silver medal, or \$5, J. Daillidaze.

For second best, bronze medal, or \$3, J. McMillan.

For the best bunch of white Muscats, silver medal, or \$5, Alex. Gordon.

Discretionary premiums have been offered to

For fine collection of pears, Thomas Sprunt.

For six fine specimens of pears, do

For like, Henry Thacker.

For extra fine specimens of second pears, Gerard Hopkins.

For nectarines, Mr. Griffin.

For three fine dishes of peaches, C. V. Spencer, West Farms.

For sweet potatoes, James Angus.

For fine collection of pears, Matthias Coleman, Gardener to A. P. Cummings, Williamsburg.

For extra large specimens of apples, A. B. Coleman, Cincinnati.

MELONS.—For the best two watermelons, bronze medal, or \$3, Alexander Gordon.

For the second best, diploma, or \$2, Mr Lighthipe.

For the best two muskmelons, bronze medal, or \$3, Isaac Bucharan, Astoria.

For the second best, diploma, or \$2, Mr. Lighthipe.

The committee on fruit consist of Messrs. Thomas Hogg, Wm. S. Carpenter, and Charles Moore.

VEGETABLES.

POTATOES—For the best peck for the table, bronze medal, or \$3, Mr. Sprunt.

For the second best, diploma, or \$2, E. Sherman, Seersville, Orange county.

BEETS—For the best twelve long blood beets, bronze medal, or \$3, Mr. Thacker.

For the best twelve turnip rooted beets, bronze medal, or \$3, Mr. John Brill.

CARROTS—For the best twelve carrots, bronze medal, or \$3, Mr. Matheson, Gowanus, L. I.

For the second best, diploma, or \$2, Mr. Brill.

PARSNIPS—For the best twelve parsnips, bronze medal, or \$2, James Angus, gr. to W. W. Fox, West Farms.

For the second best, diploma, or \$2, Julius Hartman, gr. to William H. Paine, Bloomingdale.

SALSIFY—For the best twelve roots of salsify, diploma, or \$2, Mr. Thacker.

CABBAGE—For the best three heads of Savoy cabbage, bronze medal, or \$3, Francis Briell, Astoria.

ONIONS—For the best half peck of white onions, bronze medal, or \$3—James Angus, for three varieties.

CELERY—For the best twelve stalks of celery, bronze medal, or \$3—Mr. Hartman.

For the second best, diploma or \$2—Mr. Angus.

TOMATOES—For the best half peck of red tomatoes, bronze medal, or \$3—John Brill.

For the second best, diploma, or \$2—Mr. Angus.

EGG PLANTS—For the best three egg plants, bronze medal, or \$3—Mr. Sprunt.

For the second best, diploma, or \$2—Mr. Angus.

BEANS—For the best half peck of Lima beans, in pod, diploma, or \$2—Francis Briell.

For the best half peck of kidney beans, diploma, or \$2—John Brill.

CORN—For the best twelve ears of corn for the table, bronze medal, or \$3—Mr. Sprunt.

For the second best, diploma, or \$2—James Angus.

TURNIPS—For the best half peck of turnips, bronze medal, or \$3, John O'Connell.

For the second best, diploma, or \$2, John Brill.

SQUASHES—For the best three squashes for the table, bronze medal, or \$3, Thomas Martin, gr. to H. Delafield, Seventy-ninth street.

For the second best, diploma, or \$2, Mr. Sprunt.

GENERAL DISPLAY—For the best general display of vegetables, silver medal, or \$3, Mr. Angus, for thirty-two varieties.

The vegetable committee consisted of Messrs. John Fick, Joseph Cudlipp, and David Clark.

PLANTS IN POTS.

HOTHOUSE PLANTS—For the best four specimens of hothouse plants in bloom, silver cup, or \$10, Mr. Thomas Duncan, gr. to F. J. Wolsey, Astoria.

For the second best, silver medal, or \$5, Mr. Louis Menand, Albany.

For the best single specimen of a hothouse plant in bloom, bronze medal, or \$3, Isaac Buchanan, Astoria.

For the second best, diploma, or \$2, Alexander Gordon.

GREENHOUSE PLANTS—For the best four specimens of greenhouse plants, in bloom, silver cup, or \$10, L. Menand.

For the second best, silver medal, or \$5, J. Buchanan.

For the best single specimen of a greenhouse plant, in bloom, bronze medal, or \$3, L. Menand.

For the second best, diploma, or \$2, J. Buchanan.

ACHIMENES—For the best three specimens in bloom, bronze medal, or \$3, Martin Collopy, gardener to J. H. Prentice, Brooklyn Heights.

For the second best, diploma, or \$2, A. Gordon.

CONIFERÆ—For the best collection of coniferæ, in pots, silver medal, or \$5, Thomas Hogg & Son, Yorkville.

For the second best, bronze medal, or \$3, Thomas Richardson, Rockland, West Farms.

Special premium for collection of plants, \$8, Adolf Schutz, gr. to Mr. Munn, Motthaven.

Do. for Cactus, \$2, Thomas Richardson, Rockland.

Do. for Ericas, to L. Menand.

BOUQUETS, BASKETS, ETC.—For the best pair of hand bouquets, composed of flowers promiscuously arranged, bronze medal, or \$3, Mr. Buchanan.

For the second best, diploma, or \$2, John T. Mahon, Broadway.

For the best parlor bouquet, bronze medal, or \$3, Mrs. Archibald Henderson, Brooklyn.

For the second best, diploma, or \$2, John Cranstown, Hoboken.

For the best basket of flowers, not to exceed 15 by 12 inches, bronze medal, or \$3, George Hamlyn, Yellowhook.

For the second best, diploma, or \$2, Mr. Gabrielsen.

For the best basket of wild flowers, bronze medal, or \$3, Mr. John Cranstown.

CUT FLOWERS.

ROSES—Discretionary premium for design—Adolf Schulz.

For the best twelve named varieties, bronze medal, or \$3, Matteo Donaldi, Astoria.

For the second best, diploma, or \$3, Chas. More.

DAHLIAS—For the best twelve named self colored dahlias, bronze medal, or \$3, James Weir, Gowanus.

For the best twelve named fancy dahlias, bronze medal, or \$3, same.

VERBENAS—For the best twelve named varieties, bronze medal, or \$3, Martin Collopy.

For the second best, diploma, or \$2, James Weir.

PHLOXES—For the best six, bronze medal, or \$2, J. B. Lenoir, Broadway.

Discretionary premium for beautiful seedling Petunia, \$3, Adolf Schuls.

The flower committee consisted of Messrs. J. E. Rauch, Thos. Dunlap, and Andrew Frazer.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The Stated Meeting of the Society was held September 20th, 1853.

Dr. W. D. Brinckle, Vice President in the chair.

The Committee of Finance reported, that they had examined the Treasurer's semi-annual statement and found the same correct.

AD INTERIM REPORT

OF THE FRUIT COMMITTEE FOR SEPTEMBER, 1853.

PHILADELPHIA, September 20th, 1853.

To the President Penna. Hort. Society:—

The Fruit Committee respectfully Report, that since the August meeting of the Society, several interesting collections of Fruits from various localities have been presented for their examination:

From Paschal Morris, of Westchester:—Two specimens of a Pear, from an old farmer near Westchester. Size above medium, two and thirteen-sixteenths inches long, by $2\frac{1}{2}$ broad; obtuse pyriform; greenish yellow, with some russet markings especially at the insertion of the stem, and a faint salmon cheek; stem 1 inch by one-sixth, inserted somewhat obliquely in a small superficial cavity, russeted, and slightly plaited; calyx in a shallow basin, sometimes russeted; seed rather large, dark, flat; flesh of fine texture, buttery, melting; a little more flavor would be desirable; quality at least "good."

From Amos L. Witman, North Coventy, Chester County, Pa.—*Three varieties of Seedling Plums.*

1. Fruit an inch and a half long, by one and a half broad; obtuse cordate, suture indistinct; red with a white bloom; stem five-eighths to three-fourths of an inch long, by one-twelfth thick, inserted in an open, moderately deep depression; flesh unadherent to the stone, of pleasant flavor, and "good" quality. This variety appears to be wonderfully productive; a twig three inches long by one-sixth thick, contained eight Plums—another two inches long by one-fourth thick, contained seven.

2. Fruit an inch and a half long, by one five-sixteenths: obovate; purple, covered with blue bloom; stem eleven-sixteenth by one-sixteenth; *quality inferior* except for culinary purposes.

3. Only one specimen—large, one three-fourths by one and eleven-sixteenths inches; roundish obovate; greenish yellow, mottled and dotted with white; suture broad, extending on one side from the base to the apex; stem three fourths by one-twelfth inserted in a slight depression; stone partially adherent. The specimen being pulled somewhat prematurely, a correct estimate of its merits could not be formed. We are, however, inclined to

think favorably of it, and should be happy to see specimens of it next season.

From Thomas Hancock, Burlington, N. J.—Three boxes containing specimens of a Plum, and thirty-seven varieties of Pears :

1. *Drap d'Or d'Esperin*—a small, round, golden yellow Plum, with occasionally a few crimson dots; stone unadherent, quality "very good."

2. *Cabot*—specimens too much decayed to judge of its quality.

3. *St. Ghislain*—in good condition, "very good."

4. *Cumberland*—of fine size, but in quality "scarcely good."

5. *Muscadine*—"good."

6. *Beurre Gobault*—"good."

7. *Dillen or Doyenne Dillen*—of large size and fine appearance, similar in form to the Hosen Schenck; three and three-eighths inches long, by three and one-fourth broad; round, obovate; greenish yellow, with spots and splashes of green russet; stem from three-fourths to 1 inch long, by one-fifth of an inch thick, rather fleshy at its insertion; little or no cavity; calyx open, set in a wide, shallow, sometimes russeted basin; seed ovate, brown, medium; flesh buttery, flavor pleasant, quality "very good." In the London Horticultural Society's Catalogue, and in Downing's Fruit and Fruit Trees of America, Dillen is given as a synonym of Beurre Diel. We regard it, however, as a distinct variety, ripening earlier than the latter.

8. *Washington*—a favorite Pear with us, attractive in appearance, and of "very good" quality.

9. *Copia*—a very large, handsome, Pennsylvania variety, of "good" quality when eaten at the exact moment of its maturity

10. *Great Citron of Bohemia*—scarcely worth cultivating.

11. *Golden Beurre of Bilboa*—fair, and "very good."

12. *Urbaniste*—"Best,"

13. *Heathcot*—"very good."

14. *Belle et Bonne*—"good."

15. *Marie Louise*,—specimens not being fine, the quality was only "good."

16. *Onondaga*—inferior specimens, quality only "good."

17. *Capsheaf*—"good."

18. *A Seedling from the Seckel*—originated with Mr. Wm. W. King, of Burlington, N. J. Small; roundish-obovate; uniform yellow russet; stem five-eighths of an inch long, by one-eighth thick, fleshy at insertion; no cavity; calyx nearly closed, set in a superficial basin; quality inferior to the Seckel.

19. *Beurre d'Anjou*—"best."

20. *Adele de St. Denis*—a new Belgian variety; quality "good."

21. *Fondante d'Automne*—high flavored and delicious; quality "best."

This variety has recently been extensively imported under the name of *Seigneur d'Esperin*.

22. *Bon Cretien Fondante*—"very good."

23. *Fulton*—"good."

24. *Super Fondante*—specimens small; "good."

25. *Gendesheim*—scarcely "good."

26. *Valle Franche*—quality indifferent.

27. *Napoleon d'Hiver d'Esperin*—decayed.

28. *Sullivan*—scarcely "good."

The following ten kinds were not in eating condition; *Althorpe Crassane, Buffam, Flemish Beauty, Colmar Neil, Jean de Witte, Beurre Diel, Beze de la Motte, Josephine, Figue de Naples.*

From Samuel Ott, Two varieties of Pears and fine specimens of a Plum.

1. *Bartlett*, large, handsome, "very good."

2. *Lodge*, specimens remarkably fine, $8\frac{1}{2}$ inches long by 8 broad, possessing the rich, vinous flavor of the Brown Beurre, quality "very good."

3. A large Red Plum, $1\frac{1}{2}$ inches long by $1\frac{1}{2}$ broad; oblong; light red; suture extending on one side from the base to the apex; stem three quarters of an inch long by one-twentieth thick; flesh partially adherent to the stone; quality "very good."

From Robert Buist—specimens of two pears and one apple.

1. A supposed seedling Pear, bearing some resemblance in form and flavor to Henry 4th—rather small, two and one-eighth inches long by one and one-eighth broad; obovate pyriform; yellowish green with large green russet spots and blotches, and a brownish red cheek. stem broken—fleshy at its termination, inserted without depression: calyx closed, set in a shallow, furrowed basin; seed small, black—flesh melting, buttery, of fine texture—flavor vinous—quality "very good."

2. *Doyenne Robin*—rather large, two and a half inches by two and three quarters round, bergamot shaped—greenish, covered with russet dots and splashes—stem usually very long and thick, from one and a quarter to two inches long by one-sixth thick, inserted in a deep, narrow cavity—calyx small, set in a narrow, moderately deep basin—seed large, black—flesh melting, somewhat granular—flavor pleasant—quality "very good."

3. *Fair Maid Apple*—the only specimen on the tree; rather large, roundish-oblate, inclining to conical, beautifully and delicately striped with carmine, flavor sub-acid—quality inferior.

From Wm. G. Waring, Boalsburg, Centre County—A box of fruit containing specimens of 15 varieties—3 of pears, 4 of apples, and 8 of plums.

1. *The Julienne*—Mr. Waring says his variety was introduced into Centre county from Germany, as the Summer Boncretien. The specimens were very fine and quality "very good."

2. *Summer Bon Cretien*, cultivated at Boalsburg under the names of *Sugar and Honey pear*; flavor very saccharine, but of inferior quality.

3. *Dearborn's Seedling*—very handsome specimens, and of "very good" quality.

4. *The Sink Apple*. Mr. Waring informs us that this native red apple "originated on the farm of the Hon. Geo. Boal, of Boalsburg. The original tree, which is now dead, stood over a cavern into which a stream emptied—hence the name. It was famous for its constant and abundant yield of fruit, which was in great demand for cooking, and continued in use from July to October." Specimens, when received, were entirely decayed.

5. *The Summer Bell Flower*—considered, in Centre County, a superior early baking apple, and in season the last of July and August,—also entirely decayed when the box was opened.

6. *The Royal Sweet*—a large "good" sweet apple, which is apt to fall from the tree.

7. *The Bush*—a native apple on the farm of Mr. Christian Dale, near Boalsburg, and found growing in the woods by his father. Mr. Waring says this variety is "an excellent bearer, and a great favorite in an orchard of choice sorts." Size two and three-quarters by three inches; oblate, inclining to conical—greenish yellow, with many russet dots near the crown, and occasionally a faint blush—stem seven-eighths of an inch by one-ninth, inserted in a deep, open, furrowed cavity—calyx very small, set in a deep, narrow, plaited basin, seed brown, broad, short: flavor pleasant—quality "very good."

8. *Early Yellow Prune*—said to have been obtained from Bedford county, many years ago, and is represented as being "a free grower, prodigious bearer, and not apt to rot." Size one and five-eighths by one and one-quarter—oval, pointed at each end—stem five-eighths of an inch long, by one-twentieth thick—flesh free from the stone, flavor delicious—quality "very good."

9. *Red Prune*—also introduced into Centre county from Bedford. This variety was sent on a former occasion from Lancaster, under the name of "Bottle Plum." Two inches long, by one and one-eighth broad—pyriform, with a long slender neck—suture extending on one side from the base to the apex—pale red; stem one inch long by one-sixteenth thick—handsome Plum of peculiar form and "good" quality—but said to be an indifferent bearer.

10. *Imperial Gage*—Mr. Waring remarks of this variety, that "the tree is very free from leaf blight, and the fruit from rot, hanging long, shriveling, and becoming very sugary." Specimens fine, quality "very good."

11. *A very large, late purple Plum, resembling Duane's Purple*, and said to be "a very excellent grower, a full bearer, and not inclined to rot." very large, two inches long by one and thirteen-sixteenths broad; oblong—purple—stem three-quarters of an inch long by one-twelfth thick—flesh free from the stone. Specimens not sufficiently ripe to test their quality.

12. *The Galbraith*—an early Plum, said to have originated with the late Mr. Galbraith, near Boalsburg, and is represented as being a straggling grower, but the best early plum cultivated in that vicinity. An inch and a half long by one and five-sixteenths broad—oval, purple,—stem five-eighths of an inch by one-fourteenth—flesh tender, juicy, adherent to the stone; flavor luscious, quality "very good" if not "best."

13. *Prune Damson Plum*—One and a half inches long, one and three-sixteenths wide, one and one-sixteenth thick; flattened oval, blue, stem one and a half inches long by one eighteenth thick; flesh rather dry, entirely free from the stone; flavor agreeable, quality "good."

14. *Coe's Golden Drop*—received from England for the Magnum Bonum; specimens large and fair, but not mature.

15. A variety cultivated in the neighborhood of Boalsburg as the *Peach Plum*—from which it differs in several particulars. Large, one and three-quarters inches by one and nine-sixteenths; oblong; salmon colored; stem three-eighths of an inch by one-fourteenth; stone adherent, long-obovate, one and one-sixteenth inches long, five-eighths wide, and seven-sixteenths thick; of pleasant flavor; quality between "good" and "very good."

From Thomas M. Harvey, Jennerville, near Westchester, Pa.

The Beurre Oudinot—One of the very new French Pears, imported by Mr. Harvey in 1851, and probably named in honor of Marshal Oudinot, Duke of Reggio. Size very large, three and three-eighths inches long by two and three-fourths broad; pyriform; yellowish green, with a brownish cheek; stem one inch long by one-fifth thick, curved, inserted somewhat obliquely with little or no depression; calyx of medium size, set in a wide, shallow basin; seed of a pale cinnamon color, long, acuminate, flesh of rather fine texture, juicy, flavor pleasant, quality "very good."

From Isaac B. Baxter, three varieties of Pears and the Jane Peach.

1. *The Bartlett*—One specimen of immense size, measuring three and $\frac{1}{2}$ inches long by the same breadth, and weighing twelve ounces.

2. *The Kingessing*—Specimens from a tree double worked on quince, large and fine, measuring three inches by three and one-eighth, and weighing eight ounces. When grown on quince the fruit is larger, broader, and more fair than that grown on pear stock; quality "best."

3. *The Washington*. Specimens remarkable for size and beauty; quality "very good."

4. *The Jane Peach* (Baxter, No. 1.) Very large and of delicious flavor; quality "very good."

From Charles Kessler, of Reading, a box of fruit containing a Seedling Plum, a Peach, an Apple and six varieties of Pears.

1. *Seedling Plum*—An inch and five-eighths long by one and five-sixteenths broad, obovate, light red, suture extending on one side from the base to the apex; stem three-fourths of an inch long, one-eighteenth thick; stone partially adherent, flavor sweet and pleasant, quality "good."

2. *Peach*, grown by Mr. Lott. Large, three inches long by three and one-eighth broad; roundish, dark red on a greenish-white ground; suture distinct, extending more than half round; cavity moderately deep, flesh white, red around the stone, juicy, unadherent, delightful flavor; quality "very good" if not "best."

3. *Apple*—small, two inches by two and a half, roundish oblate, inclining to conical; fair yellow, with occasionally a faint blush on the side exposed to the sun; stem three-fourths of an inch long by one-twelfth thick, inserted in a deep, open cavity, russeted in rays; calyx closed, segments very long, set in a medium sized basin, which is sometimes slightly plaited; flesh yellowish white, tender; flavor sprightly, quality "good."

4. *Rushmore's Boncretien*, grown by Mr. Wunder—very large and beautiful; quality scarcely "good."

5. *Bartlett*—specimens large and handsome.

6. *The Washington*—specimens quite large and exceedingly beautiful.

7. *White Doyenne*—specimens much fairer and finer than those usually grown in the country.

8. *A Pear resembling the Cushing*—two and a half inches long by the same in breadth; round obovate, fair yellow, stem three-fourths of an inch by one-seventh, inserted in a very narrow cavity; calyx open, set in a shallow basin; seed rather large, brown, plump, with an angle at the blunt end; flesh of fine texture, buttery, melting, fine vinous flavor, quality, "very good."

9. *A Pear* having some resemblance to the Chinese Stone Pear. Specimens not in eating order.

From Samuel Jones. The *Hanover Pear*, from Hanover Furnace, N. J. These were the finest specimens of this variety that we have yet seen; some of them measuring nearly three inches long by two and five-eighths broad. In size it is usually rather small; round obovate, green, with dull green russet markings, and a brown cheek; stem one inch by one-ninth, inserted in a shallow cavity usually angular; calyx open, set in a plaited sometimes furrowed, irregular basin; seed large, plump, acuminate, flesh greenish yellow, exceedingly melting and juicy; flavor pleasant, quality "good."

From Dr. J. K. Eshleman. A box containing fine specimens of twelve varieties of Pears, including the Diller. The four following kinds were not in eating condition: *Catinka*, *Thompson*, *Mexican* and *Doyenne Boussock*. The variety bought for the *Louise Bonne de Jersey* is not true, and is probably *Capiaumont*. *Bartlett*, fine specimens of "very good" quality. *Dunmore*, "good." *St. Ghislain*, "very good." *Fondante de Malines*, "very good." The *Duke de Bordeaux* is the same as *Dumas*, *Epine Dumas*, and *Belle Epine Dumas*; quality "good." *Hewes* scarcely "good," specimens very small. The *Diller*—size below medium; roundish ovate, with one or more of the longitudinal depressions or sutures seen in Dearborn's Seedling; skin cinnamon russet; stem an inch to an inch and a half long by one-seventh thick, inserted by fleshy rings without depressions; calyx open, set in a shallow, rather wide basin; seed small, dark, with an angle at the blunt extremity; flesh somewhat granular, buttery, possessing a fine perfumed flavor; quality "very good." Period of maturity last of August.

From W. S. Cleavinger, of West Philadelphia. Large and fine specimens of the *Bartlett*, from his own garden, and the noble *Susquehanna* Peach from Harrisburg, its original locality. The *Susquehanna* is a peach of the largest size, abounding in juice of a most delicious flavor. Quality "best."

From Caleb Cope. Beautiful specimens of the *Etruge* and *Vermash Nectarines*, remarkably fine in appearance as well as in quality.

From Dr. Arrott of this city. A *Seedling Grape*—size medium; round; greenish-white, bunches small, flesh pulpy, odor peculiar, flavor pleasant, quality good, leaf trilobed.

From Gerhard Schmitz. A *Seedling Grape*—large, oval, purple, bunches loose, large; resembles the *Isabella* in appearance and flavor, quite equal to it in quality, and perhaps a little earlier.

From Charles Jones, through Mr. Alan W. Corson, Montgomery County. Large and fine looking specimens of the *Vandiver* Apple, not ripe.

From Isaac Garretson, through the same. Handsome specimens of a small, pleasant, half-breaking Pear, grown on the premises of Mrs. Rachel Mauleby, which we regard as the *Gros Rousselet*, and which, by the London Hort. Soc. is deemed unworthy of cultivation.

From Samuel Overn, steward of the Girard College, remarkable fine specimens of the *Seckel Pear*, grown on the College premises.

From Mrs. J. B. Smith, two varieties of Pears.

1. *The Moyamensing*. The fruit of this variety remains only a short time in perfection; but this defect is compensated by its ripening in succession for a considerable period. When eaten at the exact moment of its maturity, the flavor is delicious, and the quality "best."

2. *Poire d'Abondance*. This little pear is always beautiful, and a most abundant bearer; quality sometimes "good," occasionally "very good," very

often indifferent. In the "Fruit and Fruit Trees of America," *D'Abondance*, *D'Amour*, and *Ah Mon Dieu*, are considered one and the same Pear. In appropriating these names to a single variety, Mr. Downing followed, and was misled by the catalogue of the London Hort. Soc. But so far from being identical, *Poire d'Amour* and *Poire d'Abondance* are two entirely distinct varieties, differing essentially in size, form, color, and period of maturity. The fruit of the former is very large, while that of the latter is small. The error of considering them identical probably arose altogether from the fact that the name, *Ah Mon Dieu*, was an acknowledged synonym of both.

It is stated, however, on the authority of a distinguished French pomologist, that this appellation was given to each for a very different reason—to one, in consequence of its beauty and productiveness—to the other, on account of its enormous size.

From Wm. Canby, Wilmington, Delaware, a Seedling Grape. Bunch four and a half inches long by two and three quarters broad, so compact as frequently to destroy the rotundity of the berry. Berry from seven-sixteenths to nine-sixteenths of an inch in diameter; roundish, inclining to oval; skin of a violet color, thickly covered with bloom, and semi-diaphanous; seed small, dark cinnamon; flesh tender, very juicy, not pulpy, flavor sweet and pleasant; quality "best" for a grape that will grow in open culture; leaf trilobed but not deeply, interruptedly serrulate, auriculate.

On motion, Resolved, that the Pennsylvania Horticultural Society hereby offer a premium of one hundred dollars for an effectual and economical remedy, which shall prove satisfactory to the Society, against the ravages of the Curculio.

Members elected.—B. A. Mitchell, William B. Goddard, and Robert L. Rutter.

T. P. JAMES, *Rec. Sec.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

The Twenty-fifth Annual Exhibition of the Massachusetts Horticultural Society was held in Boston, on the three days 21st, 22nd, and 23rd of September.

The daily papers, for which we are indebted to the kindness of Thomas P. James, Esq., pronounce the exhibition to have been extremely attractive.

The plants shown were numerous, the designs and bouquets tasteful. The greenhouses and gardens of Messrs. Hovey & Co., Evers & Bock, James Nugent, Azell Bowditch, Thomas Page, J. S. Cushing, Winship & Co., and M. P. Wilder were represented.

The Fruit, as is usual in Boston, was very fine and in great quantities—the Hon. Marshall P. Wilder contributing between 300 and 400 varieties of Pears.

We annex a list of the premiums awarded:

PEARS—For the greatest number and best grown, Hovey & Co., first premium,	\$40 00
M. P. Wilder, second premium,	20 00
<i>Best twelve varieties</i> —First premium to W. R. Austin,	20 00
Second premium to Josiah Richardson,	15 00

Third premium to Josiah Stickney,	\$12 00
Fourth premium to Hovey & Co.,	8 00
<i>Best dish</i> —First premium to Josiah Richardson,	6 00
Second premium to Chas. M. Bocket,	5 00
Third premium to Samuel Downer, Jr.,	4 00
Fourth premium to Samuel Walker,	3 00
<i>For the best collection</i> —Gratuity of ten dollars to Samuel Walker.	
<i>Assorted fruits</i> —For the best basket, first premium to Azell Bowditch,	\$10 00
Second premium to Samuel Walker,	7 00
<i>Best design</i> —First premium to W. C. Strong,	10 00
Second premium to John Hill,	7 00
APPLES—Best 12 varieties of 12 specimens each, to Mrs. Burr, the Society's Plate, value,	\$20 00
Second prize to Josiah Lovett,	15 00
Third prize to A. D. Williams,	12 00
Fourth prize to B. V. French,	8 00
For the best dish of 12 specimens of one variety, first premium to Josiah Stickney, (for Gravenstein,)	\$8 00
Second prize to M. H. Simpson, (for twenty-ounce pippins,)	5 00
Third prize to H. Vandine, (for Porters,)	4 00
Fourth prize to George Everett, (for Baldwins,)	3 00
For handsome varieties, to John Gordon, gratuity of six dollars.	
GRAPES—For the best 5 varieties, 2 bunches each.	
First premium to Mrs. F. Durfee, Fall River,	\$12 00
Second premium to W. C. Strong,	8 00
Third premium to Breck & Son,	5 00
For the best 2 varieties, 2 bunches each.	
First premium to Nathan Stetson,	6 00
Second premium to B. D. Emerson,	4 00
Third premium to Dr. Durfee,	2 00
<i>Gratuities</i> —To R. M. Copeland, 2 dollars; J. M. Fessenden, 5 dollars; M. C. Poore, 2 dollars; Thos. Waterman, 5 dollars.	
VEGETABLES—For the best display and greatest variety—first premium to J. B. Moore,	\$10 00
Second best to Chas. Stone,	8 00
Third best to A. D. Williams,	6 00
Fourth best to B. V. French,	4 00
For best mammoth squashes, silver medal to Jas. Dunn; second, 3 dollars to A. W. Stetson.	
<i>Collection of Squashes</i> —To A. W. Stetson, the Society's silver medal.	
<i>For fine collection</i> —First premiums to Hyde & Son,	\$5 00
Second premium to Henry Bradley,	8 00
Third premium to B. Harrington,	2 00
<i>Egg Plants</i> —Best to B. V. French, 1 dollar; Parker Barnes,	1 00
<i>Lima Beans</i> —To J. B. Moore,	2 00
For fine collection—C. S. Holbrook,	8 00
For Tomatoes—To Nahum Stetson,	1 00
Fine collection—To Jas. Nugent,	5 00
“ “ Mrs. Burr,	5 00
“ “ Stone & Co.,	1 00

- Fine collection.—Josiah Stickney, \$3 00
 “ “ A. D. Webber, 4 00
 For Pumpkins—First premium to Thos. Page, 1 00
 For Potatoes—To C. A. Hewins, 1 dollar; J. B. Moore, 1 00
 Large Pumpkins—To A. W. Stetson, silver medal; and for two extra
 Cuba squashes, \$3 00
 For Squashes—Hyde & Son, \$1.
 To Charles W. Stone, for black Spanish Melons, \$4.
FLOWERS. Vase Bouquets—For the best pair suitable for the Bradlee Vases,
 to Hovey & Co., the Bradlee Plate, value, \$10.
 Second best, Winship & Co., \$6.
 For the best pair of bouquets for the Society's Vases, to Jas. Nugent, \$10.
 Gratuity, to Evers & Bock, \$5.
 Parlor Bouquets—Best round, for parlors, to Hovey & Co., first premium, \$8;
 James Nugent, second do., \$6; M. P. Wilder, third do., \$5; Evers & Bock,
 fourth do., \$4.
 Cut Flowers—For the best display, Thomas Page, \$8.
 Second best, to Winship & Co., \$6.
 Third best, to P. Barnes, \$4.
 For Plants—For the best display of not less than 20 pots, to J. P. Cushing, \$12.
 Second best, to Azell Bowditch, \$10.
 Third best, to Thos. Page, \$8.
 Fourth best, to Hovey & Co., \$5.
 Cockscombs—For the best 6 pots, J. P. Cushing, first premim of \$3.
 Second best, to Evers & Bock, \$2.
 To James Nugent, a gratuity of \$2.
GRATUITIES. On Bouquets—To Winship & Co., \$2; Thomas Page, \$2; B. B.
 Mussey, \$2; W. E. Carter, \$2.
 For Wreaths—To Miss Mary Fisher, \$1; F. M. Howard, for Verbena, \$2; N.
 R. Preston, for Fig-Tree, \$1.
 For Cut Flowers—Jas. Nugent, \$3; Hovey & Co., \$2, Messrs. Burr, \$3; Mrs.
 John Heard, for Caladium odorum, \$1.
 To C. Griffith, for two cockscombs and bouquet, \$1.
 To Dennis Murray, for native flowers, \$3, and dried specimens of ferns, \$5.
 For Pot Plants—Gratuities: to Winship & Co., \$5; M. P. Wilder, \$5; James
 Nugent, \$5; Evers & Bock, \$5.
 For Designs. Gratuities—To Miss Russel (for a floral temple), \$3; and (for a
 floral basket), \$2.
 To B. B. Mussey, for a basket, \$2.
 To Azell Bowditch, for a floral design, \$10.
 To Mrs. E. Storey, for a basket, \$2.
 To Messrs. Burr, for a grass vase and cornucopia, \$5.
 To Miss M. A. Kendrick, for a floral basket, \$2.
 To Mrs. Wm. Kendrick, for a floral screen, \$3.
 To C. S. Holbrook, for a bouquet design, \$2.
DAHLIAS. For the premier prize, no competition.
 For the best specimen blossom to Jas. Hyde & Son, \$3.
 For the best tipped, to Messrs. Burr, \$1.
 “ scarlet, to James Hyde & Son, \$1.
 “ striped, “ \$1.
 “ blush, “ \$1.
 “ dark tipped, “ \$1.
 “ red, to Azell Bowditch, \$1.
 “ scarlet, to Jas. Nugent, \$1.

For the best maroon tipped, to Jas. Nugent, \$1.

For the best twenty-four dissimilar blooms, to Messrs. Hovey & Co., \$7.

Second best to Parker Barnes, \$5.

For the best eighteen dissimilar blooms to Jas. Hyde & Son, \$6.

Second best to Jas. Nugent, \$4.

For the best twelve dissimilar blooms, to Hovey & Co., \$5.

Second best, to Azell Bowditch, \$3.

PENNSYLVANIA HORTICULTURAL SOCIETY:

The twenty-fifth Annual exhibition of this Society, was held in the Chinese Museum, on Wednesday, Thursday and Friday, the 21st, 22d and 23d of September.

The display of plants and flowers was as usual varied and interesting: no where are to be seen rarer plants, or more beautiful flowers. The lower saloon, which was used for this part of the display, was arranged as usual with rows of tables, on which were shown contributions from the various collections of our amateurs and nurserymen, the collections of plants and cut flowers for premiums. For the first premium were shown three collections by amateurs, and two by nurserymen. Among the plants worthy of note were the *Cissus discolor*, and the *Dictyanthus Pavonii*, in the collection of J. F. Knorr; the *Brownea grandiceps* in that of F. Lennig; the *Nepenthes Rafflesiana* belonging to James Dundas; the flowers and leaves of *Nelumbium speciosum*, and *Saccolabium Blumei* major and *Peristeria*, from Mr. Cope, and *Cattleya bicolor* from Mr. Buist.

The upper saloon was tastefully ornamented with wreaths of Laurel and Hemlock boughs: a great improvement on former years. The display of fruits, especially of grapes, which were arranged around a rustic temple at the west end of the room, was very good. The Vegetables, which occupied the eastern half of the room, divided from the fruits by a pavilion decorated with evergreens and plants, were as usual in great profusion. The number of visitors was almost a third larger than for some years previous; and taken altogether the exhibition was one of the most successful we ever had.

The designs were—a large fountain from Mr. Raabe; a summerhouse from Mr. Cope, and a design of cottage and garden from Robert Egee.

Premiums Awarded for Plants and Cut-flowers.

For the best collection of 20 plants in pots, \$15, to Jerome Graff, gardener to J. F. Knorr. For

Nierembergia grandiflora,
A. Aubletia, *A. grandiflora*,
Veronica Andersonii,
Dictyanthus Pavonii,
Geranium Tom Thumb,
Ipomoea sp.,
Schubertia graveolens,
Begonia fuchsioides,
Abelia rupestris,
Beaumontia grandiflora,

Allamanda cathartica,
Cissus discolor,
Clerodendron squamatum,
Lycopodium cæsius arboreum,
Ipomoea ficifolia,
Pharbitis limbata,
Nepenthes distillatoria,
B. manicata,
Tabernaemontana longiflora,

For the best collection of 20 plants, to a commercial grower, \$15, to Thomas Farley, foreman to R. Buist. For

Veronica Andersonii,	Ceropegia elegans,
Catharanthus albus,	Angelonia Gardnerii,
Fuchsia Mazeppa,	Chamærops Borbonica,
F. Gem of the season,	Medinilla magnifica,
F. Confidence,	M. erythrophylla,
Stigmaphyllon ciliatum,	Ageratum cœlestinum,
Plumbago capensis	Pentas carnea,
Clerodendron squamatum,	Epacris Copelandii,
C. speciosissimum,	Cyrtanthera magnifica,
Ixora coccinea,	Dracœna ferrea.

DAHLIAS—For the best 24 blooms, a silver medal to R. Buist.

For the best American seedling, self colored, to G. Schmitz, 2 00.

For the best parti-colored, 2 00.

ROSES—For the best 12 named varieties, by a commercial grower, 3 00, to John Sherwood.

For the second best, to R. Buist, 2 00.

TORENIA ASIATICA—Best specimen, to T. Meehan, gardener to Caleb Cope, 1 00.

PENTAS CARNEA—To R. Buist's gardener, 1 00.

GLOXINIAS—Best collection to T. Robertson, gardener to Harry Ingersoll,

VERONICA—Best specimen to F. Lennig's gardener.

RUSSELIA JUNCEA—Best specimens to Peter Raabe.

MANETTIA GLABRA—Do. do. do. do. second best to Gen. Patterson's gardener.

HOYA CARNOSA—Best specimen to Thos. Meehan.

VERBENAS—Best six varieties to R. Buist's gardener; 2d best to Thos. Meehan, C. Cope's gardener.

FERNS—Best collection to James Bisset, gardener to James Dundas.

ACHIMENES—Best collection to Harry Ingersoll's gardener; 2d do to D. Rodney King's gardener.

ORCHIDS—Best collection to Thos. Meehan, gardener to C. Cope; 2d best do to T. Farley, to R. Buist.

Special Premiums.

Five dol. to Jas. Dundas' gardener for Allamanda Cathartica; 5 00 to C. Cope's gardener, for Nelumbium speciosum; 3 00 to H. Pratt McKean's gardener, for Agave geminiflora; 3 00 to James Dundas, for Torenia Asiatica.

DESIGN FORMED OF CUT FLOWERS, ETC.—Not to exceed six feet square at the base:

For the best and most appropriate—to Peter Raabe	-	-	\$30 00
For the 2d best do to Joseph Cook	-	-	20 00
For the 3d best do to Robert Egee	-	-	10 00

BOUQUET OF DESIGN—Suitable for an ornament to the table:

For the best and most approved—to J. Kinnier, gr. to John. Dunlap,
Silver Medal

For the 2d best	do	to gr. to R. Cornelius	-	\$5 00
For the 3d best	do	to Robert Egee	-	4 00
For the best formed of grasses		to Miss Webb, Wilmington, Del.		5 00
For the 2d best	do	to N. A. Roe	-	3 00
For the best of indigenous flowers,		to Thos. Meehan gr. to C. Cope		3 00
For the 2d best	do	to Jno. McIntosh	-	2 00
For the best basket of flowers,		to Thos. Meehan, gr. to C. Cope		5 00
For the 2d best	do	to Benj. Gulliss	-	3 00
For the 2d best	do	to Robt. Kilvington	-	2 00

Special Premiums.—Verbenas.

Five dollars to Peter Raabe, for a design of growing—two dollars each to D Rodney King, for a basket of indigenous flowers, and to Isaac Gollins, gr. to Gen. Patterson, for a neat design—and one dollar each, to Andrew Dryburgh for a bouquet; to Peter Raabe, for a basket; to Thos. Meehan, for a small design; to D. Rodney King, for a small design; and to Joseph Gross, gr. to H. A. Dreer, for a bouquet.

GRAPES (Native).—For the best named collection—to T. Hilliard, Silver Medal.

For the 2d best	do	to Isaac B. Baxter	\$3 00
For the best six bunches, Isabella—		to E. Smith, gr. to M. Wain	2 00
For the 2d best	do	to J. Bisset, gr. to Jas. Dundas	1 00
For the best	do	Catawba to E. Smith, gr. to M. Wain	2 00
For the 2d best	do	to Dr. Chamberlain	1 00
For the best	do	Elsinborough, to Townsend Hilliard	2 00
For the 2d best	do	to Peter Raabe	1 00

GRAPES (Native).—For the best six bunches of another variety, Bland,—to

Townsend Hilliard	-	-	-	2 00
For the 2d best	do	do	to W. Savery	1 00

GRAPES (Foreign).—For the best named collection—to Geo. Roberts Smith

Silver Medal.

For the 2d best	do	to G. Lazenby, gr. to	
David S. Brown	-	-	3 00
For the best 3 bunches Hamburg,		to G. Lazenby, gr. to D. S. Brown	3 00
For the 2d best	do	to Robert Cornelius	2 00
For the best	do	Chasselas to G. Lazenby, gr. to D. S. Brown	2 00
For the 2d best	do	do to W. Westcott, gr. to H. Cowperthwait	1 00
For the best	do	White Muscat, to G. Lazenby, gr. to D. S. Brown	3 00
For the 2d best	do	do to Hiram B. Fildes	2 00
For the best	do	Frontignac to H. W. S. Cleveland	3 00
For the 2d best	do	do to G. Lazenby, gr. to D. S. Brown	2 00
For the best	do	of another variety, to A. J. Smith, gr. to E. Hall	3 00
For the 2d best	do	do to A. J. Smith, gr. to E. Hall	2 00

Your Committee cannot refrain from expressing their gratification at the splendid display of foreign grapes, surpassing in that any other heretofore presented. Your Committee take great pleasure in calling the attention of the society to the many new varieties of seedlings from foreign grapes, especially those from the garden of Peter Raabe, who is entitled to great praise for his perseverance in that department. And also to a delicious grape from Wilmington, which is evidently a variety of the Burgundy; decidedly the most delicious of the seedling kind ever exhibited. And your Committee would direct attention also to some remarkably fine Hansteretto grapes, from the garden of Dr. W. Wright.

And closing, recommend a special premium of two dollars each, to William Johns, Geo. M. Smith and John Riley, gr. at Insane Asylum.

- PEACHES—For the best one bushel, of a named variety, to Wm. D. Clark, Delaware City Silver Medal.

For the 2d best, one bushel, of a named variety, to J. J. Glover, Mt. Ephraim, N. J. \$4 00

For the best, one peck, of a named variety, to S. H. Penn 3 00

For the best, one dozen do to C. M. Harker, Mt. Holly 3 00

For the 2d best do do to Sol. Gaskill, Mt. Holly 2 00

NECTARINES—For the best, one dozen do to Hiram B. Tilden, Tacony 2 00

For the 2d best do do to T. Meehan, gr. to C. Cope 1 00

PLUMS—For the best, two dozen, of a named variety, (Coe's Golden Drop) to Samuel Grasius, Huntingdon, Pa. \$3 00

For the 2d best, two dozen, of a named variety, to Benj. Hunt 2 00

Special Premiums of one dollar each for seedling Peaches to Benj. Gullies; to Benjamin Buckman, Mt. Holly, for seedling Peaches; and to Mrs. J. B. Smith, for English Walnuts.

MELONS—For the best three specimens, named variety, to Elisha Roberts, for citron, \$2; for 2d best do, to Thos. Meehan, for do, \$1.

WATERMELONS—For best three specimens, Mountain Sweet, to David Perre, \$3; for second best, three specimens, Mountain Sweet, to Stacy H. Scott, \$2; for best three specimens, of another variety, to T. D. Brown, for Spanish, \$3.

NATIVE PEARS—For the best collection, named varieties, to Thomas Hancock, silver medal; for 2d best, Thos. Hancock, \$3; for the best one peck Seckel, to George W. Earl, \$3; for the 2d best, to Mrs. J. B. Smith, \$2; for the best, six specimens, of another named variety, to J. B. Baxter, for Washington, \$3; for 2d best do do, to A. M. Eastwick, for Petre, \$2.

FOREIGN PEARS—For best collection, named varieties, to Mrs. J. B. Smith, silver medal; for 2d best do, to Thomas Hancock, \$3; for best, one peck, any named variety, to J. B. Baxter, for Duchess D'Angouleme, \$3; for 2d best, one peck, to J. B. Baxter, for White Doyenne, \$2; for best half peck, to H. W. S. Cleveland, for St Michael Archange, \$2; for 3d best, do, to J. Vandeventer, for Louise Bonne de Jersey, \$1.

The Committee recommend that a special premium of two dollars be awarded to each of the following contributors:

R. Buist, for a fine and extensive collection.

Jos. S. Cabot, Salem, Mass. do

Robert Cornelius, do

Mrs. Liggett, for a dish of remarkable fine "Regnier."

Mrs. Kreider, for do do White Doyenne.

H. Wetherill, for do do do

Mrs. J. B. Smith, for do do do

W. H. Keichline, for do do do

James Harrison, for do do Duchesse d'Angouleme.

Mrs. J. B. Smith, for do do do

J. W. Hartmann, & Co., for do Bartlett.

Also, a premium of one dollar to Elisha Roberts for 2 very fine specimens of Citron Melons—being short in number for competition.

APPLES—For the best collection, J. S. Thomas, Macedon N. J.; for second best do, Charles Kessler, Reading, Pa.; for the best bushel, John Perkins, Moorestown, N. J.; for the second best do, John Perkins, Moorestown, N. J.; for the best peck, John Perkins, Moorestown, N. J.; for second best do, John Perkins, Moorestown, N. J.; for best six specimens, Charles Kessler, Reading, Pa.; for second best, do John Perkins, Moorestown, N. J.

FIGS—For the best twelve specimens, Mrs. Knorr, Rising Sun.

QUINCES—For the best half peck, Samuel Hutcheson; for the second best do, W. W. Keen.

Special premiums to J. Bisset, for a fine dish of Quinces; also a special premium to L. Chamberlain, for a fine dish of Figs.

They also recommend a special premium of a silver medal to B. V. French, Braintree, Mass., and to A. H. Erust, of Cincinnati, Ohio; also a premium of three dollars, to D. Miller, Jr., of Carlisle, Pa., for contributions, all of which were received by the Society too late to come into competition, and which your Committee think fully deserving the awards now asked. They are also pleased to call the attention of the Society to two dishes of fine Apples, grown by H. B. Lindley, Athens, Ohio; finer specimens than any exhibited before them this year, which also came too late for competition.

POTATOES—For the best, one bushel, to Thos. Yeaman - - - \$3 00

For the 2d best do to David P. Caley, Delaware Co. 2 00

For the best Sweet do to Wm. Cook, Bridgeport, N. J. 3 00

For the 2d best do to Jesse Rambo, Gloucester Co., N. J. 2 00

BEEFS, Long—For the best one dozen, to Jas. Jones, gr. at Girard Col. 2 00

Round—For the best do to Albinus L. Felton - - 2 00

CABBAGES—For the best do to James Jones - - - 2 00

For the 2d best do to Daniel Riley, Germantown 1 00

SALSIFY—For the best do to James Jones - - - 2 00

ONIONS—For the best, three dozen, yellow, to Jno. Riley, gr. Insane Hosp'l 2 00

For the best, three dozen, white, to Jas. Jones - - 2 00

The committee would call especial attention to a Basket of fine Mexican Wild Potatoes shewn by Jas. M. Tage, Burlington; also to another of Potatoes raised from Bermuda tubers by Mrs. M. Krider as possessing merit.

CABBAGE—For the finest six heads, J. Riley, gardener for G. W. Carpenter, No. 282; for the second J. Riley, Insane Hospital, 261; for the best of another sort, Caleb Cope, 153.

LETTUCE—For the best six heads, Albanus Felton, 165; for the second Daniel Qiley, 266.

CELERY—For the best six stalks, Albanus Felton, 165; for the second W. W. Keen, West Philadelphia, 155.

EGG PLANTS—For the best six, Joseph Jones, Girard College, 163; for the second, J. Campbell, gardener to J. C. Bayard, 272.

TOMATOES—For the best peck, J. Riley, Insane Hospital, 261; for the second, Albanus Felton, 185.

SWEET MAIZE, for table use—For the best three dozen, Albanus Felton, 165; for the second, Daniel Riley, Germantown, 266.

MARROW SQUASHES—For the best three, Stacy H. Scott, N. J., 259. second best to T. D. James, Woodbury, N. J., 152.

PUMPKINS—For the best, John T. Trite, 280; for the second, Daniel Riley, Germantown, 266.

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VISIT TO DR. J. P. KIRTLAND.

By S. S. HALDEMAN.

Dr. Kirtland is a professor in the medical college of Cleveland, and as one of the best naturalists of the country, was employed some years ago in the natural history department of the Ohio Geological Survey. His residence is about six miles from Cleveland on the Lake shores, and during the sessions of the college, he returns home every evening.

Besides his medical and natural history pursuits, he is a most successful farmer and horticulturist, and has added some fine new varieties to the list of cherries. His grounds are kept in excellent order, and his experiments are systematically conducted and under way at all times.

Dr. K. has, I think, the best Maclura hedges I have seen. He recommends them strongly, and says they are objected to by those who do not know how to cultivate them. They require a good soil, well dug or ploughed, and will succeed in forming an impenetrable hedge if they are forced to throw out lateral shoots close to the ground by cutting down from time to time to such an extent that must seem fatal to those unacquainted with the hardy nature of the plant.

I was shown several American plants, which, strange as it may appear were imported from France with more facility and certainty than they could have been procured here.

In modern horticulture, much of the value of a nursery and orchard depends upon the accuracy with which the plants are named, and the judicious cultivator will prefer making his selections from a limited number of varieties which he can depend upon being what they are represented to be, to supplying himself from much fuller catalogues of doubtful authenticity.

As the laws which have brought forth a particular variety continue to act upon it, we have no evidence of their permanency by continued propagation

of the same kind. It is therefore, necessary for the horticulturist to make experiments both to secure new varieties and to revive old ones; and in such experiments it is of the greatest importance that there should be no doubt about the authenticity of the labelling, arising from carelessness, misplacement, neglect in taking notes, or want of permanency in the labels.

The Doctor's mode of labelling involves some trouble, but he considers himself repaid by the certainty of his results. His mode is to use wooden labels marked with branding irons, which render the name as permanent as the stick, and more permanent than those written with acid upon zinc.

The mode of forming the irons is as follows: A set of bold faced printing types is selected, capitals only being used, about half an inch in the height of the letter. These are used as models in an iron foundry; from which iron types are cast, together with some spaces; and hollow branding irons in which to set the types forming a name. These may be fastened by a screw, or by spaces. A vertical handle of thick iron rises out of each. For the commoner varieties the types may be less in their respective irons, and large quantities of the finished labels may be kept on hand.

Dr. K. uses bones freely placed upon the ground around the base of such trees as are starved or bad bearers, and he showed me several which had been resuscitated by the materials afforded by the slow decomposition of the fertilizer.

Although Dr. Kirtland is advanced in years, he is in full activity, and enjoying a separate reputation in medicine, natural history, and horticulture, sufficient to make him distinguished in each, without the aid of the other two.

He is now studying insects, a subject which he commenced at a period when most people would feel themselves justified in relinquishing old studies.

In the opinion of Dr. Kirtland, the climate of northern Ohio is so well adapted to the culture of grapes, that the time is not distant when it will rival Cincinnati in the production of this fruit and the manufacture of wine. Unfortunately, there is some danger that the cultivation of the vine and the manufacture of its product, are destined to receive a check from the combined action of a few fanatical residents of towns, who wish to trammel the the great body of the agricultural population with laws of merely a local application.

For the Florist and Horticultural Journal.

CURRENTS.

With the exception of the Strawberry, there is not a small fruit that holds a more important position than the Currant. It is of the most hardy nature; subject to no disease, good, better or best in all localities, according to treatment, and even when it is cast aside and only visited when its fruit is matured for the table or the market. In nineteen cases out of twenty it is entirely neglected, receiving neither pruning, manuring or culture—degenerating, as it is termed—degenerate—no—never. It will produce rich scarlet, silver or jet black clusters, five inches long, and three in circumference, almost equal to bunches of grapes, and a certain crop.

Culture—Plant in a deep, sandy loam, that is very highly manured, that is, manure from the stable or barn yard laid on three or four inches thick, and well incorporated with the soil eighteen inches deep—select plants that have been grown from cuttings, and about two or three years old; cut the wood of the past season down to three or four eyes, and from the stem or roots cut out every eye or shoot leaving the stem clean six inches to a foot above ground—dig the holes one foot deep and five feet apart; the soil that is replaced amongst the roots must be broken fine with the spade and gently tramped down;—give a few waterings in dry weather and you will have a growth of from one to two feet the first season.—During winter, prune back those shoots to within six inches of the proceeding year's wood, and thin out any branches that are not six inches from each other—the fruit is produced on spurs of the old wood, and when those spurs make a small growth, it should be cut back to one eye. When the bushes have reached three feet in height after pruning, they should then have their young wood cut back every pruning season to one eye, and whenever the branches offer to be nearer to each other than six inches they should be cut clean out, forming the bush always with a round head and quite open in the centre. After their regular yearly pruning, they must have a periodical manuring; digging or forking it in amongst the roots. You may thereafter rest assured of a full crop in wet or drought;—no failure;—always a supply for the table, the confec-

tioner or market, where they meet a ready sale at a very remunerating price.

Now for the Sorts;—"what a catalogue these nurserymen do make, it puzzles me to choose," is the conclusion amongst so many high sounding names, all *very fine, very large, very beautiful* and other expressable terms; but let us see what they are really worth. The most important are Red, viz:

Cherry Currant—the very largest fruit in large clusters; but to my taste rather tart. *Holland Grape*, cannot be distinguished from the Red Dutch. *Goliah*, not so large as its name imparts, very little improvement on the Red Dutch. *Fertile de Pallnau*, said to be very productive, but with me not more so than the old Red Dutch, when under equal culture: it is, however, a shade darker in color to a close observer. *Knight's Sweet*—we had hoped that this sort was really sweet, to make it a very palatable desert fruit, but find it quite acid enough for any palate; it is a good bearer and makes long tapeing bunches. *Victoria*, or the old *Raby Castle* currant can be more readily distinguished by the foliage than the fruit; it has, however, the advantage of hanging longer on the bushes than any of the other kinds; by tying a mat over the bush they may be kept till August; a few bushes should be covered with some material to shade them, as soon as nearly ripe, which prolongs their maturity at least one month.

WHITE CURRANTS; we have only fruited the *White Dutch*, *White Grape* and *White Crystal*: the last is certainly a very poor affair in size but quite transparant and sweeter than either of the others; the genuine *White Dutch* is as large and productive as any of them, and shows that horticulture in this particular has not advanced in fifty years. Let every one try the coming season to grow a new and better white currant; in three years it will produce fruit; and report to the Editor of the Florist;—nothing could be more desirable than an improvement in this branch of fruit, which is emphatically the fruit of the million; every garden can produce them, and every citizen will purchase the product, which is neverfalling. The best quality commands from nine to twelve cents per quart; a

good bush will produce five quarts, in value equal to a bushel of corn, and with no more labor.

BLACK CURRANTS, are known by the names of *Black Grape*, *Black Naples*, *Old Black* and *Early Black*. Two kinds only are worth attention, the Black Naples and the Early Black, the former for its size and lateness, and the latter for its flavour and earliness; if I was to have only one sort it would be the Early Black. Their culture, pruning and management are the same as above described, with the exception that they do not succeed so well in warm climates, and even with us do best in a half shaded situation. Such as on the north side of a wall or fence, but not under, or in the vicinity of large trees which impoverish the soil. As a confection in sickness, sore throat, or bronchitis, there is nothing equal to black currant jelly; they make also most excellent pies and puddings, which every good housewife should know and try. If, Mr. Editor these few remarks will induce any one to try and grow those exceedingly desirable fruits, to even approach the perfection they are capable of attaining, I will not have spent this hour in vain; or if any one requires to renew the stock of those they possess, they have only to take the young shoots that are about a foot long—deprive them of all the buds on the lower part; set them six inches deep in rich soil, partially shaded from the sun—cut the top to within four inches of the soil, and in three years they will form handsome plants for removal or permanent planting.

Yours Truly, R. BUIST.

Rosedale, Oct. 1853.

STRAWBERRY QUESTION.

CINCINNATI, OCT. 4, 1853.

When Mr. Meehan has for twenty years cultivated as great a variety of foreign and native strawberries, as Walter Elder (a late writer in the *Florist*) has done, and paid special attention to their sexual character, he will know the Hovey's seedlings, McAvoy's superior, and the extra red, by the leaf, and see no changes in their sexual character. Even Mr. Downing, knew nothing of

the varieties of the strawberry from the stem and leaf, and his Hovey, when sent to the Horticultural Society at Boston, was by all pronounced not to be the Hovey. It is easy to procure evidence to satisfy Mr. Meehan. He received three plants of the Extra Red from Cincinnati, and one was Hermaphrodite, or not a pure pistillate. I direct the varieties I cultivate to be kept in separate beds. Yet in many of them, from neglect or a chance seedling I yearly find many staminate, but have never yet seen one (except staminate necked pine seedling) but could by the stem and leaf, be detected. During forty years, I have got strawberry plants from the east, and often found mixture. One of our most reliable gardeners sold east a variety of our seedlings which he bought here from a reliable gardener, but found to his regret, there was a great mixture. Stranger still, Mr. Meehan claims I have admitted a change by cultivation, in the sexual character of the plant. He said the Extra Red, with him, which is pistillate, bore some staminate blossoms. I stated, that I raised the Extra Red, and that it was a pure pistillate. But as we do in raising seedlings, find an occasional Hermaphrodite, that sometimes bear a few pure pistillate blossoms, I have no reason to doubt, that a plant strongly pistillate might be produced, bearing a few staminate or Hermaphrodite blossoms. What bearing has this on the question, of changing the character of a pistillate to a staminate, by cultivation? All I ask of Mr. Meehan, is, to get either of his friends, Mr. Buist or Dr. Brinckle, of Philadelphia, to endorse his doctrine, or get from either of them plants of the Hovey, or necked pine, and satisfy them of a change by cultivation. The Editor of the Florist is severe on his correspondent, Mr. Elder. I would inquire what has been the Editor's experience? Has it been for more than twenty years, and his attention directed to the question, or as long as Mr. Meehan's, one or two years, on a small scale? I give Mr. Meehan credit, as he came from England, for admitting the existence of pure staminate and pistillate plants. When he has for a year operated on plants furnished by either of his friends that I have named, he will promptly acknowledge his error. I fear no injury from Mr. Meehan's error in the west, among our strawberry growers. Men who give daily attention to

their plants, and bring from 20 to 120 bushels of a day to market, cannot be mistaken. And those who cultivate for family use, will be governed by their opinions, and their own experience. For all say, till instructed on the subject, they could not produce a fourth of a crop, and often not a single fruit. Mr Meehan says, my gardener, Mr. Pentland, found plants with both sexes in my bed of Extra Red. He did find an interloper there, and a large number among other kinds—and being recently from England, where the character of the plant was not known, and being unacquainted with our seedlings, could not readily distinguish them by the stem and leaf. He is now satisfied it was a different variety, and not an Extra Red. For information on the subject, I would refer to the veteran strawberry grower of Philadelphia, Col. Carr, who is I presume still living. I believe that he has for fifty years cultivated the old pistillate Hudson. I would inquire of him, if he has in fifty years ever seen a change in the sexual character of that, or any other variety? Mr. Meehan declares, as he can by a change of heat, change the sexual character of a few plants, “the distinction between staminate and pistillate plants is worthless.” If true, it would not lessen the value of the principle, and I would ask where Mr. Meehan’s common sense had strayed, when he made the assertion. I have for many years cultivated a great variety of strawberries, on the south, west, and north borders of high stone walls, and never had a change in the sexes. Yet here was a greater change in the atmosphere, than Mr. Meehan had in his greenhouse.

N. LONGWORTH.

In the October number of the Farm Journal, Mr. W. R. Prince of Flushing, L. I., contributes a long article on the strawberry question; to say the least, it is, like the former articles by the same gentleman, in very bad taste: the writer indulges in remarks not proper in any discussion; but it is a well known axiom that those who are in the wrong always make the noise.

There has not been as we have said before, anything in the way of argument on the side of the *unchangeable* Cincinnati theorists, all is assertion, denial, and, on the part of Mr. Prince abuse of Mr. Meehan.

As a scientific fact, the change from apparently pistillate to perfect flowers is one of the simplest;—the strawberry in its natural state has perfect

flowers, is furnished with pistils and stamens; chance seedlings produce under a high state of cultivation flowers in which the stamens are abortive; left to themselves, they return to their natural condition of flowers with perfect parts. The pistillate flowers of "improved varieties" are degenerations, the results which Mr. Downing and Meehan as well as many others have observed are merely nature exerting her forces to mend what a "high state of cultivation," and so on, has made faulty.

If Mr. Prince's article were not so long, or if it had any scientific bearing or imparted any instruction on the subject we should have copied it; but as it is we can only say that for his sake we regret that the Farm Journal has so large a circulation and so many readers.

Since writing the above we have received the letter of Mr. Longworth, in which, as will be seen he makes the same admission alluded to by the Editor of the Farm Journal; "I saw no reason to doubt, that a plant strongly pistillate may be produced, bearing a few staminate or hermaphrodite blossoms." He adds "what bearing has this on the question of changing the character of staminate or pistillate by cultivation?" Just as much as the fact that the Editor of the Florist's having no experience in strawberry raising has to do with the fact that the change is possible. When Mr. Meehan and Mr. Downing produced pistillate plants (for no other reason, at least in Meehan's case for declaring them "not Hovey's," than that they had evident stamens,) the cry was "*the thing is impossible*," now Mr. Longworth has acknowledged that it is possible; I cannot find that any one has said that a full crop can be produced without staminate being planted among the pistillate; even Mr. Meehan announced that the plants from which he took his runners were so pistillate that he was obliged to procure a staminate plant to fertilize them. Whether in the advance of horticultural science, the possibility of retarding or developing any part of a plant, the stamens or the pistils, the petals or the leaves, may not be arrived at, who shall say? But before that is done we shall have to do away with all talk of "impossible things," and when anything is presented for our dissent or approval examine whether it be reasonable or not, without at once stigmatising it as either impossible or nonsensical.

AZALEAS.

These are the most valuable of all greenhouse plants for the amateur cultivator, being easy of cultivation, and affording a rich display of flowers during winter and the early spring months, and that too, without any great degree of artificial heat. Natives of the Chinese hills they are not injured by being subjected to a few degrees of frost if the wood is ripe and the plants in a state of rest. Their roots, like those of the *Rhododendron*, are very small, tender and fibry, requiring a regular supply of water; at the same time air must find ready access to the roots. In potting a plant requiring these conditions, proper efficient drainage must be secured, the soil should also be of a porous free kind. A fibry loam, mixed with clear sand and small charcoal will answer this purpose. The quantities of sand and charcoal dust necessary, will depend on the nature of the loam. If clayey a good portion will be requisite to counteract the adhesiveness. It is difficult to convey an accurate idea of the kind of soil to be used, the term *loam* being so indefinite, embracing soils of widely different quality. A good criterion is to press a handful of it when in a half dry state, and throw it down, if it breaks and crumbles up, it will be in a fit state for use, but if it remains hard and lumpy, more of these corrective materials should be added.

Spring is the most convenient and suitable season for repotting, just before they commence growth. The only season that they require particular care is while they are making a growth. During this they must be carefully watered and kept in a moist, somewhat shady, and warm atmosphere. This can easily be afforded them in a greenhouse by placing them all together where they can be frequently syringed, and slightly shaded from intense sun. Water must be carefully administered, those that are fresh potted will not require so frequent applications as those that have filled the pots with roots. I would here caution the amateur against the extensive use of *so-called* peat soil. Much of the material that goes under this name is unfit for the growth of any plant, being for the most part

vegetable matter in the last degree of decomposition, inert, and worse than useless when used alone. I have seen a black unctuous, sour mass of bog-mold carefully stored as being "just the stuff for Azaleas." Such "stuff" when composted with barn-yard manure and other substances may be formed into a valuable application for hungry soils, but for the growth of delicate rooted greenhouse plants it is injurious rather than beneficial.

During the plants growth, attention should be given to pinching the points out of strong shoots, and otherwise, prune and tie out to preserve a uniform habit. Towards the end of June, the young wood will assume a brown colour, when this is observed, the plants should be taken out of the house and placed in a situation where the mid-day sun can be kept from them by shading or other means, this will be a salutary check on the growth and favor ripening of the wood and formation of flower buds. About the month of August they should be placed in an exposed position, and the pots plunged to preserve the roots from sudden changes of wet and dry. After remaining two months in this position the point of every shoot will feel round and hard, indicative of a well set head of bloom. After removal into the house they should be rather sparingly watered and kept cool and airy, unless they are wished to flower early, which is easily attained by placing them in a warmer temperature.

Cuttings of the young wood strike root very readily in the spring, especially of the large leaved varieties. The smaller leaved sorts grow better when grafted on such as *Phoenicea*, a strong growing variety, easily increased by cuttings. Very fine standard plants may be produced by grafting on tall stems. I once saw a plant of *variegata*, grafted on a four feet stem as beautifully dependent as a weeping willow.

DELTA.

SOUTHERN PLANTS WORTHY OF CULTIVATION

In passing through the gardens in America, one cannot help being struck with the little attention which has every where been bestowed upon our native productions. In Europe, they are properly estimated, and their cultivation sedulously attended to. Many plants that might be made the ornaments of our flower-beds, but which are now overlooked, would be highly esteemed on the other side of the Atlantic, if they could be procured, or if the climate there was suited to their culture. We pay large sums for foreign flowers, which frequently have little to recommend them, and suffer others of the greatest beauty to "blush unseen" in our native forests.

I have undertaken in this fragment of a communication, to point out a few shrubs and herbaceous plants, with which we ought to ornament our gardens, and which can be obtained without much difficulty from South Carolina and Georgia.

If the same care be bestowed upon them, as has been lavished upon plants originally not possessed of half their beauty, there is no reason to doubt but that from amongst ourselves we might produce the most brilliant results, and in many instances eclipse all that has been effected in the improving plants from abroad.

The names of the plants which I beg leave to recommend are taken from Elliott's Botany of South Carolina and Georgia. Many of these have, since the publication of that work, been changed and perhaps in a few years will again be altered, but that is of no importance; they are as well known by their old names as by their new.

I shall first enumerate the shrubs which I think worthy of cultivation, and afterwards the herbaceous plants, interspersing here and there a few remarks.

Pinckneya pubens, a small tree about ten feet high, the foliage dark green, and the flowers, with their large bracts, bright red.

Cyrtilla racemosa, fragrant white flowers:

Gelsemium nitidum, the most beautiful of flowering shrubs, whether we consider the permanency of its leaves, the golden color and copiousness of its flowers, or their most delightful perfume. It may not be able to withstand the severity of the winters here without some protection, but in a greenhouse would be invaluable. It grows naturally as far north as Norfolk, in Virginia.

Kalmia hirsuta, very dwarf species of this pretty genus, seldom rising upright more than six or eight inches.

Elliotta racemosa, *Andromeda nitida*, and *A. mariana*, all very ornamental and the *A. nitida*, an evergreen.

Vaccinium arboreum, a small tree about six or eight feet high; when in flower is entirely covered by a profusion of white blossoms; the fruit ripens in October.

Styrax grandiflorum and *S. glabrum*, highly ornamental, and the last very fragrant with the odor of the white jasmine, which it very much resembles in the form of its flowers.

Halesia diptera. I have seen the *H. tetraptera* growing in this city, the flowers of this other species are double the size and full as numerous.

Stuartia malacodendron; most beautiful; when one considers what has made of the Camellia, which in its original and natural state makes but a poor appearance, what may we not expect from an assiduous, continued and proper cultivation of this splendid flower.

Mylocarium ligustrinum, an evergreen, and highly ornamental when in flower.

Bejaria racemosa, possessing all the beauty of any of the Azaleas, and at the same time having fine shaped, glossy, evergreen leaves.

Asimina grandiflora, a shrub not two feet high, producing large white flowers.

HERBCEOUS PLANTS.

Canna flaccida; *Thalia dealbata*, grows in the water, they are therefore perfectly protected from the effects of frost. *Salvia azurea*; *Iris tripetala*, as fine a species as can be found in any quarter of the globe. *Houstonia rotundifolia*, a small plant which hardly rises from the earth, one of the first offerings of the spring, growing on the road sides, and resembling small patches of snow. *Spigelia marilandica*; *Phlox glaberrima*, flowers throughout the whole summer; *Phlox pilosa*, *Phlox subulata*; *Viola pedata*, with two and three coloured flowers; *Convolvulus sagittifolius*; *Sabbatia paniculata*, *Sabbatia gentianoides*, with rose coloured flowers three inches in diameter; *Asclepias pauperula*; *Hydrolea corymbosa*; the four different species of *Pancratium*; *Lilium Catesbæi*; *Helonias erythrosperma*; *Rhexia glabella*, the ornament of the forests in the month of June; *Silene fimbriata*; *Jussiaea glabella*, a water plant which frequently covers the surface of the ditches and canals with its golden flowers. *Lythrum alatum*; *Sarracenia variolaris* and *S. flava*; *Hypericum glaucum*; *Passiflora incarnata*; *Hibiscus grandiflorus*, *H. speciosus*, and *H. scaber* with yellow flowers. *Polygala lutea*; *Lupinus villosus*; *Clitoria virginica*; *Liatris secunda*, *L. elegans*, *Liatris odoratissima*; *Aster squarrosus*; *Chaptalia integrifolia*.

All these are perennual, and with probably one or two exceptions would bear the greatest intensity of our winters. They can be obtained without much difficulty and at little expense.

J. LC.

MANAGEMENT OF CIDER APPLE TREES.

Tree Guards.—Many proprietors at the present time go to the expense of posts, two, three or four of which they join together with cross-pieces. This is unquestionably the best mode of protecting the trees against cattle and wind, but it is not everywhere adopted. In many places guards are employed that injure more than they protect the trees, and which cannot in any case maintain them against the action of the wind.

With the view of preserving them from the shock of axles, shafts, horses' collars, &c., the stems of the young Apple trees which are in tilled ground are completely and closely twisted round with straw ropes to the height of 4½ feet. The bad effects of this guard, which in nowise prevents the trees from being thrown down when they get a severe shock, are to cause strangulations of the stem, and, above all, to deprive it of the free access of air and light, which are always of great benefit to the young bark; and lastly beneath the straw covering various insects that are hurtful to vegetation breed in perfect security.

Leaning Trees.—Many Apple trees, especially in the fields, lean to one side from the effects of the wind; and in our part of the country they lean so much over from the west, that a stranger, if he were lost, could find the right direction by merely looking at the stems of these trees. The majority of them have been thus blown aside for want of a post guard, to which they might have been fixed, or the tree might have been kept upright by means of some sods piled against the stem on the side opposite to the direction of the wind.

The neglect of these precautions renders the trees disagreeable to the eye, obstructs cultivation, and makes them more liable to be overthrown by high winds.

Suckers.—Trees often throw up suckers which absorb the sap to no profit, but, on the contrary, to the injury of the head of the tree. Common sense would teach us to uncover these suckers to the place where they originate, and then cut them off close, so that they may not again spring up; but this is not the usual way of going to work.

The most careful, pass a spade between the stem of the tree and the suckers; then striking vigorously, they wound the former, and by breaking and tearing away the suckers from the roots, wounds are formed which in healing absorb a portion of sap which would have gone to promote the growth of the tree. But still more frequently no attention is paid to the removal of these suckers, the care of stopping their growth being left to the cows and sheep.

In arable land, bruises and tearing of the bark by axles, plough beams, collars of horses, &c., are of frequent occurrence, because the ground is

worked as near as possible to the tree, in order to have less to dig. These wounds and cankers continually recurring, if they do not directly kill the trees, soon stop their growth, diminish the produce, and shorten their existence.

Gathering the Fruit.—This is also a frequent cause of injury to the trees. Instead of waiting till the Apples are sufficiently ripe to detach themselves by the branches being shaken, either by a person up in the tree, or by one on the ground with a hooked stick, they are often gathered too soon, and as they do not readily part, the branches are struck with poles. By thus bringing down the fruit, many fruit-spurs and leaf-buds which would possibly become flower-buds, are likewise broken off.

Modes of keeping the Fruit.—If the quality of the cider depends on the fitness of the instruments and vessels used, on the temperature, or the manner of crushing and pressing the Apples, as well as on the fermentation of the juice, it also greatly depends on the mode adopted in preserving the fruit, on its state of ripeness, and on the mixture of particular varieties in certain proportions. If the growers only knew how much rain deteriorates Apples that are laid in heaps out of doors for want of sufficient buildings to protect them, they would construct very cheap sheds by means of straw mats, formed and supported with rods, in order to preserve the fruit from this drenching, which, being repeated, doubtless takes away part of the juice, especially when they are ripe or nearly so. If this fact were not acknowledged, I would say to the unbelieving, “put a sound and nearly ripe Apple in a glass of pure water, and leave it there for seven or eight days; after that time you will find that the water is of a reddish tint, and the Apple almost without flavour. Now, how can this be explained, if not by the fact, that a part of the juice of the Apple has passed through the pores of the skin, and diffused itself in the water; whilst the latter has taken the place of the juice and penetrated into the flesh of the fruit. Apples, therefore, should be gathered in dry weather and afterwards sheltered from rain. The custom of mixing together different kinds of Apples is also injurious, for the following reasons. The different sorts, although gathered at the same time, do not afterwards acquire, in equal periods, the same degree of maturity, and some keep longer than others after being fully ripe. The consequence is, that whilst waiting for the ripening of the later sorts, the others rot, and no one, I should suppose, will venture to say that the pulp of rotten Apples can give a juice fit for making good cider. Occasionally, to avoid this evil, the Apples are crushed too soon, and those that are not ripe only yield a colourless juice, which is very liable to become acid. It is, therefore advantageous to separate the sorts, because each heap being composed of equally ripe fruit, we are not exposed to the danger of crushing green or decayed Apples with those of which the colour and perfume indicate a per-

fect degree of maturity. This is not the only advantage derived from keeping each sort separate, for by adopting this plan we can mix any sort in proper proportions so as to obtain cider of the best quality. Those well acquainted with cider-making know, by experience, that if a certain sort of Apple were employed by itself, it would produce a sour, pale cider; and, on the other hand, that another sort would yield thick, syrupy juice, which would clarify with difficulty, or would even become dark by the action of the air; but by mixing these two sorts of Apples, a cider of very good quality is obtained. It would be difficult to generalise the principles on which we should make mixtures of the varieties of Apples with the view of improving the quality of the cider, because the nature of the soil, the aspect, and the age of the trees? greatly the quality of the juices of fruits, and also because it is almost impossible to know the identity of varieties, the names of which vary according to the locality.

This important part of cider making cannot therefore have any light thrown on? without repeated experiments made by good practical observers. We know that intelligent cultivators manage well in this respect, but no one has yet thought of assisting his brethren by publishing those modes of proceeding which are the results of his own experience; and this is much to be regretted. The action of frost also injures the quality of cider, and late Apples are nearly always kept, if not out of doors, at least in buildings readily penetrated by cold. In this case we can easily prevent the frost from affecting the Apple, by covering the heap with a layer of straw from eight to ten inches in thickness, which is again covered with damp cloths, such as waggon tilts, &c. This simple and easy protection is neither new nor unknown, but it is too seldom made use of.

We will not continue further our strictures on the neglect and bad treatment of which the Apple trees are too generally victims. Although this enumeration is far from being complete, we think that we have said enough to show the advantage there would be in taking better care of this tree, which is in Normandy what the Vine is in the countries more favoured in point of climate. To manage better than is generally the case is neither attended with more difficulty nor with greater expense, as we shall endeavor to show in the following part of this manual.

(To be continued.)

The following from an address by Dr. John H. Rauch, of Burlington, Iowa, before the Southern Iowa Horticultural Society, is a worthy tribute to the merit, and a just censure of the neglect of our own Flora.

The cultivation of our indigenous plants, is a subject to which I would call the attention of this society, one which you have so far almost totally neglected, a neglect of which I am sorry to say you not alone but nearly all who have been similarly engaged in this country are guilty. Your gardens are filled with plants of a foreign growth, plants that are difficult to cultivate and in many instances far less beautiful than those which grow upon our prairies neglected. Why this is so, I really cannot conceive; there are many who know all about foreign plants, but take them into our fields and forests, and they are not able to distinguish one plant from another.—This is fashionable floriculture, a species of cockneyism not to be admired. That we are governed too much by fashion is a deplorable truth, and it is one of the prevailing sins of the present day that fashion in these things is often mistaken for taste.

“Despotic Fashion in fantastic garb,
Oft by her vot’ries, for the magic robe
Of Taste mistaken, with ill guiding step,
Directs our path.”

For Americans to cultivate foreign plants which are not as handsome as those that are indigenous which they neglect, is certainly in bad taste. The ignorance of men, with regard to our own plants, who should know better, is also surprising. In illustration of this, I will relate an instance that occurred in your own midst. Quite a number of plants were sent here from a long distance, as great and rare curiosities; they were received as such, but lo and behold, upon examination they were found to grow abundantly in our swamps and lowlands. Many will no doubt be surprised when I say that we have a rival in *Nelumbium luteum*, for the famous *Victoria regia*; it is found growing in the waters of our own Mississippi, and I have no doubt would be as all other plants could be greatly improved by cultivation. Many will no doubt also be surprised, when I tell them, that on our more elevated and sandy prairies, we have a plant belonging to the Mexican Flora, *Amorpha canescens*, the flower of which will vie for beauty with the cactus that they take so much pains to cultivate because it blooms indigenous on the table lands of Mexico, and I have no doubt if it were generally known that this plant belongs to the Mexican Flora, it would have ere this received their attention, and occupied a prominent place in their gardens. By these remarks I do not wish to be understood as condemning the cultivation of exotics, but let ours claim your attention first, then those

of a foreign country may with propriety. It is like many Americans visiting other countries without first making the tour of their own land. It is high time that we should throw off, in this respect the thralldom of fashion, emancipate ourselves from this slavery, and be American in our floriculture as well as in government. I am an American, I love everything that is American, we have the largest lakes, the longest rivers, the widest and most fertile prairies, and if not the largest the most useful plants. It seems to me that everything which nature has given us, is of a much more practical character, than the productions of other climes, and this may no doubt have some influence in causing ours to be the most practical nation on the Earth; that while the *Victoria regia* only gives pleasure to the sight and calls forth our admiration, the *Nelumbium luteum* helps to nourish and sustain the life of the wandering Indian, untutored in the arts and schools of civilization.

Our lily, moccasin flower, butter-fly weed, orchis, dogbane, and many others will vie for beauty with any that are found in other parts of the world. I had prepared a list of plants found in this vicinity, which would adorn any garden, but shall not tax your time and patience by reading it upon this occasion.

During the past summer in order to call the attention of the members of the Society to the beauty of our native plants, I selected some of them and brought them to their monthly meetings, and if I can in this manner succeed in awakening an interest in them, I shall during next season willingly incur the trouble of procuring a number of such plants as may be in bloom at the time of each regular meeting, and as an evidence of the interest this Society takes in the cultivation of our indigenous plants, would suggest the propriety of offering a premium by it, for the greatest number and finest cultivated.

A NEW PITCHER PLANT.

To the Editor of the Florist.—I was much gratified with the account of the *Sarracénias* you have in your last. This interesting tribe has had justice done it by cultivators, and I am pleased to see any notice of them tending to draw attention to their peculiarly pleasing forms. In a recent number of the "Smithsonian contributions," I find another new member of the family figured and described by Dr. Torrey. It is said to have been first discovered in northern California by Mr. Brackenridge in 1842, growing in a

marsh. Dr. T. establishes it as a distinct genus from *Sarracenia*, dedicating it to Dr. Darlington of West Chester, Pa., the well known author of so many valuable botanical works, under the name of *Darlingtonia Californica*. "It differs from *Sarracenia* in the calyx not being calyculate; in the form of the petals; in the somewhat definite and uniserial stamens; in the dilated turbinate ovary; and especially in the absence of the large umbrella shaped summit of the style, which is so conspicuous in the former genus." From the plate the flower has somewhat the form of a *Pyrola*, and is altogether very beautiful. Will not some of our Horticulturists undertake to show us this in cultivation?

NEW OR RARE PLANTS, FLOWERED FOR THE FIRST
TIME THIS SEASON, AT SPRINGBROOK.

No. VIII.

PENTAPETES PHENECIA.—This plant has been long ago described by Botanists, but is not now I believe in cultivation. I raised my plants from seed introduced as I believe by the late Mrs. Knorr, of West Philadelphia. It has a very erect, uninviting habit of growth, but the flowers which appear late in the fall are very pretty, about one inch across, and of a bright crimson, having in the centre 5 finger-like processes—probably petaloid stamens. It is allied botanically with the Mahernias, but in general appearance would be taken for some *Malva*. Its straggling habit will perhaps be against its value as a greenhouse plant, but it is a good addition to our stock of fall flowering border flowers.

PERISTERIA ELATA.—The "Spiritu Sancto" of the newspapers, and *Dove flower* of orchideous collections. A pseudo-bulb presented to Mr. Cope last spring by Col. Totten of the Panama railroad, flowered beautifully this fall. Its waxy dove resembling blossoms, with their delicious fragrance, and long period of remaining in blossom, combine to render it a most desirable orchid. It is growing in a pot of broken charcoal and moss.

BRUNFELSIA (*Francisea*) UNDULATA.—Some writers speak of "Freaks of Nature;" such would suspect her of placing the flowers of *Gesneria tubiflora* on some luxuriant species of olive, to form this plant. The same delightful fragrance too exist in the flowers. The plant is of a very erect obstinate habit of growth, and, so far does not show a tendency to bloom

freely. Imported by Mr. Cope last year from Mr. Lee of London. It grows well in coarse, turfy loam, in a stove exposed to the full sun, at a temperature of 65° in winter; and kept in a slightly shaded greenhouse in summer.

MILTONIA CLOWESIANA.—A small growing orchid resembling in size and appearance the well known *Epidendrum cochleatum*. The flowers come out in a three flowered spike about six inches long at the base of the pseudo bulb as it approaches maturity. Each flower has the ground color white, changing to yellowish, on which is thickly set large brown blotches—and with the column purple. In my specimens they measure about 1 to 1½ inches across. It grows well on a block of wood with a little moss attached to it. Though not one of the handsomest orchids, it can scarcely be called second rate. It was imported by Mr. Cope from Loddiges of London.

SACCOLABIUM BLUMERI MAJOR.—In speaking of one of these plants exhibited at Chiswick, the reporter styles it “a living fountain.” An appellation more characteristic could not perhaps be selected. Though our plant is but young its pendulous raceme of over a hundred flowers measured 14 inches long and 2 broad. It is easily managed. Our plant is growing in pot of broken charcoal and crocks—an old root is planted in this up which the aerial roots creep. It delights in being frequently lightly syringed, if it never at any time becomes overdosed. It was imported by Mr. Cope from Mr. Low, of Clapton.

CALANTHE VERATRIFOLIA.—A well known white flowering terrestrial orchid of standard character as an exhibition plant, and generally found in good collections. It is of easy culture, doing well in a pot of moss, charcoal, and coarse turfy peat. Imported from Messrs. Loddiges.

THOMAS MEEHAN.

CALENDAR OF OPERATIONS.

NOVEMBER.

FLOWER GARDEN.—One of the last thought of things, too frequently, is to apply manure to flower beds. But it is scarcely less essential to a fine summer display, than it is to the production of fine vegetables; and certainly as necessary as to trees, or the lawn. Still it should be applied with caution. While a poor soil will only grow plants to a diminutive miniature size, which, though clothed with a profusion of small, starved looking blossoms, make no show; a soil over rich will cause too great a luxuriance of foliage, which is always opposed to an abundance of bloom. In most cases

I prefer half-decayed leaves—where these could not be had I would use stable manure. The former spread over the soil two inches thick, or the latter one inch—would form a dressing which in ordinary cases should last two or three years. It is difficult to get flowers to do well in even the most favorable soil, if it is liable to hold water to stagnation in winter. Where flower gardens or beds exist under such circumstances, advantage should be taken of the present season to have it thoroughly underdrained. It will be more beneficial in the end than the most judicious manuring; it is indeed in itself a powerful means of fertilizing the soil. Where circumstances render the draining of such places inconvenient, a temporary advantage can be gained by digging up the soil at this season very roughly, so as to expose as much as possible to the action of the frost. This is at best but putting a patch on an old garment—an apology for the want of means to do better.

The planting of trees will still continue to engage our attention at every favorable opportunity. Many prefer at this season to remove trees in the winter by the "frozen ball" system. There is nothing gained by this practice. To those unacquainted with this mode of planting, I may as well describe it. Just before frost is expected, a trench is dug around a tree a few feet from its base, leaving the tree so, that with a rope at the top, it can be easily drawn over. A hole is then dug for it in the situation desired. When the "ball" has become frozen through around the tree, it is removed to the prepared hole; and, when a thaw comes, the soil is filled in around it. I have said there is nothing gained by it, and there are many disadvantages. If the tree has been removed a "time or two" before, as most nursery trees have, it will have an abundance of fibres near the stem, and can be successfully removed without much regard to the "ball of earth" either in fall or spring. If it has never been removed before, that is a tree growing naturally, it will have no fibres at its base, and so no "ball of earth" can preserve them, so that a tree which can be moved successfully on this freezing system, can be as successfully done without it. The disadvantages of it are that it exposes the injured roots for a long time to the injurious action of the frost and the elements, besides the frequency of the operation being improperly done by several attempts being made at its completion. I have given the system a fair trial, and have done with it. The main object should be to preserve all the roots possible with the tree, keep them moist and preserve from injury, then go-a-head and don't wait for frost.

GREEN HOUSE.—I have very few remarks to offer under this head in addition to what I made last month. Watering, airing, and preserving from insects, occupying most of a gardener's spare time at this season. Growth

should not be much encouraged at this season; plants will consequently not require much air, the main object for its admission being to keep down the temperature on sunny weather, and to guard against damp. Those plants which will grow, as Pelargoniums, Cinerarias, Heliotrópe, Chinese Primroses, and many plants required for winter or spring blooming, should have all the light possible, and would be benefitted by the application of manure water once a week. Guano water is as good as any thing; a half pint to about 10 gallons of water. The sweepings of the fowl or poultry house is nearly as good, in about the same proportions is Corréas, Epacrises, Pimelias, and a host of ornamental plants will now be coming into blossom, cheering their possessors during many an otherwise dreary hour during the wintry season, and rewarding a thousand fold by their freshness and beauty the outlay they may have occasioned, or the trouble they have given to those who have loved and protected them.

HOT HOUSE.—The most critical season to these plants is fast approaching. A very common error, especially in houses heated by smoke flues, is to keep the temperature too high. Unless the house be heated by hot water, a temperature of 55° will do perfectly well. The absorbent property of heated bricks in flues is so great, that the excessive waterings necessary to replace the moisture they absorb is more injurious to the plants than a moderately low temperature. In a house heated by hot water, a temperature of 65° may be maintained with advantage. The house will be very gay with Habrothumnus, Cestrums, Bégonias, Pentas, Plumbagos, and so on, and the syringe must be kept in daily requisition. It is highly advantageous to put a little sulphur, lime water, or soft soap into the syringing water occasionally; as the red spider, mealy bug, or scale, respectively may make their appearance; this, with a vigorous use of one's eyes and fingers at times will keep them pretty well in check. Orchideæ, those of them which bloom on finishing their growths, will begin to add considerably to the attractions of the hot house. As any come into flower they should have less water at each time, but be watered more frequently than they have been accustomed too; a very slight "dewing" with the syringe is all that is required. Heavy waterings and high temperature together destroy more orchids than many would dream of. Still atmospheric moisture must be retained for them in any case.

VEGETABLE GARDEN.—As in the Flower Garden, so here the season calls attention to the improvement of the soil. Draining and trenching are two of the most important operations. In performing the latter the soil need be only *loosened* to the depth of two or three feet, with manure mixed well through it. Fine gardens are frequently rendered barren for years by

the sterile clayey subsoil being brought to the surface. Asparagus beds, as soon as the stalks are cleared off, may have a good portion of the soil on them raked off into alleys, and its place supplied with three or four inches of rotten manure. If the ground is of a light or sandy nature salt may be applied before the manure. In wet soils it is injurious. Where the root crops are unhoused the remarks in last month's calendar will still be applicable. It is a nice point to preserve celery well through the winter to the spring. The main things are to keep it cool, just above freezing point, and just moist enough to keep it from withering. Many take it up, and put it in a cellar, where the above mentioned conditions can be obtained, packed in sand. My usual plan is to take it up and pack them pretty close together side by side in some sheltered spot, putting a thick coating of dry straw on them on the approach of severe frost; keeping it dry by laying old shutters over all.

T. J.

FRUIT.

Gathering and storing fruit. The preservation of winter fruit is a matter deserving more attention and care than is generally bestowed upon it. It is not now as formerly when fruit eaters and growers were content with a few months supply. Nothing less should satisfy the cultivator than a dish of fresh, ripe fruit every day in the year. Of course, very much depends upon a judicious selection of trees, that ripen fruit in rotation; but the dependence for a winter supply lies mainly in the mode of keeping the late sorts through the winter and spring. The time of gathering requires particular attention; if allowed to remain too long on the tree, the fruit becomes deteriorated. It should be picked just as the seeds commence changing color. The sacrifice of a few fruit in ascertaining this period is of no importance, compared with the advantages of having them stored in proper season. Choosing a fine dry day, pick every fruit carefully by hand, and guard against bruising them in the slightest degree. The smallest bruise lays the foundation for putrefaction. The object now is to preserve the juices of the fruit without subjecting them to decay. The way to insure this is to place them in a temperature which will neither drain them of their juices by evaporation, nor promote decay through damp. Light also should be excluded. The difficulty of keeping the finer fruits in cellars arises from either moisture or heat in these apartments. It has been found in the preservation of ice, that houses constructed above ground, secured from external influences, keep it much longer than the best constructed well. The same principles occur in the preservation of fruit. An exclusive artificial temperature must be maintained, as uniform as possible. A minimum temperature of 34° and a maximum of 40° may be considered the greatest fluctuation desirable. The principal difficulty lies in keeping a proper hy-

grometrical state in the atmosphere ; should any symptoms of damp or mildew appear, it should be removed by ventilation. Care should be taken in the admission of external air whenever its temperature is much above that of the room. When this is the case a deposition of dew will take place and the evil be increased rather than lessened.

Frequent and careful examination will be necessary to remove all that shows symptoms of decay, such should be promptly removed and everything kept as sweet and clean as possible. The late keeping pears as Easter Beurrè require to be removed into a warmer temperature, say about 65° for a week or ten days before eating. This has a tendency to remove all grittiness, and heightens the flavor of many varieties. So much depends upon the keeping and ripening of winter fruit, that many kinds of the highest repute in Europe have been considered here unworthy of notice, simply from want of proper treatment in this respect.

Planting trees should be proceeded with without delay, the past month has been peculiarly favorable for trenching and preparing soil. The advantages of preparing soil when in a dry state are very great, as it crumbles and mixes better, lays open and permeable to the atmosphere, and retains more heat. It is very hurtful to clayey soils to work them in a wet state. The effects may be traced in years afterwards in the hard cemented lumps which nothing but lengthened exposure to rain and frost can pulverize. Where trees are to be permanently planted the should be put in the best condition, and left as light and friable as possible, since it cannot afterwards be remedied without injuring the roots. Should the weather continue favorable planting may be continued until the end of the month, after that, except on very dry soil, and elevated locations, it will perhaps be as well to defer it until spring. We must again urge the advantages of autumn planting. Not only on account of there being more leisure to attend to it at this time, and the soil in the best possible condition for its performance, but principally because of the additional certainty that the trees will make a good growth the following season, consequent upon the increase and establishment of roots during winter, and the diminished risk of losing them should a dry summer occur.

Grapes—both in and out doors should be winter pruned towards the end of the month. Whatever mode of pruning is practised should be strictly carried out. A continued change of systems will be unsatisfactory. Nor indeed is this the proper season to commence a change, even should one be contemplated. The management of the plant during summer must be conducted with reference to the winter pruning, so that the present will only be the completion of the years labor so far as pruning is concerned. The borders should be slightly forked over, adding a topdressing of woodashes,

which supply ingredients largely used by the grape, refuse charcoal is very effective in preserving a proper degree of porosity. A covering of six or eight inches of half rotted manure may then be spread on the surface, which will enrich the soil, and prevent frost from injuring the roots.

Orange and Lemon trees, should receive very little water from this until spring, when the wood is properly ripened, and the soil kept comparatively dry; a few degrees of frost will do them no harm. If kept in a cellar no water will be required, unless, as we have observed in some cases they are placed near a furnace in order to keep them warm. This kindness, however, is entirely misplaced. A close cellar is sufficient, fire heat is more injurious than beneficial, but where the plants are unavoidably set near heat, on occasional watering will be required, to supply the evaporation from the leaves.

S. B.

SAVE YOUR PLUMS—THE CURCULIO CONQUERED!

EDITORS:—I find by experiment that the curculio, that curse of all plum trees, can easily be conquered. The little fellow is not so bold as some imagine. If he were large enough perhaps his *own shadow* would affrighten him. Although so small an insect, he has a keen eye, and can discern an object. I have heard it observed that plum trees growing near a door or path, that is frequently passed, would be exempt from the curculio. We conclude that this object passing the tree keeps them at bay.

For several years past I have let the curculio have his own way; and he has taken every plum for his own use and behoof. But I came to the conclusion last spring, that the little imps were rather too selfish and greedy—that I would put in for a share with them; I procured cotton batting—put 8 circles, 6 to 12 inches apart, around each tree; for several mornings I “*smudged*” the trees with ashes, as recommended; two trees, of the same variety standing some 3 rods apart, treated as above; each tree will set with plums; on one of those trees I suspended a piece of *white* cotton cloth, about half a yard square, in this way;—Shave out a rod as long as your cloth is wide, tack one edge of the cloth to the rod, suspend it from a limb of the tree, at the centre of the rod, and a little breeze of wind will keep the *flag* in motion, and the little rebels will quit the field. On two other trees I suspended newspapers which had the same effect, but the rain and wind will soon displace the papers—cloth is best.

The result is, those three trees promise a good yield of sound plums, while all the others are destroyed—not one remains on the trees.

L. NORRIS.—*In Farmer's Companion.*

PENNSYLVANIA HORTICULTURAL SOCIETY.

OCTOBER 18, 1853.

The stated meeting of the society was held in the Lecture Room of the Museum this evening.

Dr. Wm. D. Brinckle, Vice President, in the chair.

The following Premiums were awarded:

Design of Cut Flowers, for the best, to Thos. Meehan, gardener to Caleb Cope; for the second best, to Joseph Cook. *Basket of cut flowers*, for the best and for the second best, to Thomas Meehan.

Pears, for the best, the Doyenne Gris, and for the second best, the Duchesse d'Angouleme, to Mrs. J. B. Smith.

Special Premiums.—Two dollars for a fine display of Grapes, to H. B. Tilden. One dollar for a display of Reine Claude de Bavay Plums, to Thomas Meehan. The Apples exhibited, although of fine appearance, were unripe, and not in condition to test.

The fruit committee submitted the following:

AD INTERIM FRUIT REPORT.

To the President Penna. Hort. Society:—

The Fruit Committee respectfully Report, That since the September meeting of the Society, the following Fruits have been submitted to their examination:

From Alex. Parker, of Moyamensing—A *Seedling Peach*, nearly three inches in diameter; roundish; dull yellow, with a reddish cheek, and so dark about the base as to appear almost black; flesh yellow, very juicy; flavor delicious; quality "very good."

From A. M. Eastwick—The *Petre Pear*, from the original tree—specimens very fine, two and three-quarters inches long, by two and one-half broad; stem variable, in one specimen five-eighths of an inch by one-sixth, in another one and one-quarter by one-eighth; flavor luscious; quality "best."

From Isaac B. Baxter—The *Jane Peach* (Baxter's Seedling, No. 1); large, ten and one-half inches in circumference; roundish oblate; greenish yellowish white, with a red cheek; free; flavor delicious; quality "very good" to "best."

From Mr. Ladd, 242 Filbert Street—The *Larissa*, a Seedling Pear of small size; obovate pyriform; greenish yellow, a good deal russeted, with a mottled red cheek; flesh rather dry; flavor saccharine and pleasant; quality scarcely "good."

From Peter Williamson, 296 South Second Street—Specimens of a *Seedling English Walnut*, of extraordinary size and excellence; two and one-sixteenth inches long, and one and five-eighths wide, one and one-half thick; shell remarkable for its thinness; kernel delicious; quality "best." The tree sprung from an imported nut planted in 1846, and is now fifteen

and one-half inches in circumference at the surface of the earth. It bore in 1852; for the first time. The attention of Nurserymen is directed to this variety, which could probably be dwarfed and brought into speedy bearing by being worked on the *Juglans præparturiens*.

From Mrs. George Liggitt, 140 Christian Street—The Regnier Pear—size full medium, two and one-half to three inches long, by two and one-half to two and three-quarters broad; some specimens weighed eight ounces; obovate; yellow, with a number of minute russet dots, and very often a brilliant carmine cheek; stem cinnamon color, three-quarters to seven-eighths of an inch long, by one-sixth thick, inserted in a rather deep, narrow cavity; calyx open, with short erect segments, set in a wide, shallow basin; seed dark, plump, acute, with an angle on one side of the blunt end; flesh fine texture, buttery, melting; flavor exceedingly luscious; quality "best." Under the name of White Doyenne or Butter Pear, which it is to all intents and purposes, this variety has repeatedly received a premium at our Annual Exhibitions. And not until recently were we informed by Mrs. Liggitt that it originated from seed of the Butter Pear planted about twenty-five years ago by her grandmother, Madame Regnier. On examining the tree, which is now two feet seven inches in circumference at the surface of the earth, there is no appearance of its having been worked. Many suckers have sprung up from the root, presenting a similarity in wood and foliage to the tree itself. The growth is more erect and the top more full and rounded than is usual with the White Doyenne. We would suggest a trial of this variety in localities where the White Doyenne has long since ceased to flourish.

From Henry W. Terry, Hartford, Connecticut—The Clark Pear, a supposed Seedling. Size medium, two and one-half inches by two and seven-eighths. roundish; inclining to turbinate, broad at the crown, rounded at the base; skin smooth, greenish yellow, with numerous small russet dots, and sometimes a warm salmon cheek; stem one-inch by one-seventh, inserted in a very superficial depression; calyx small, closed, set in a wide, rather deep, furrowed basin; seed brown, flat, inclining to oval, with a slight angle at the blunt end; flesh fine texture, buttery, melting; flavor excellent, with a delicate aroma; quality at least "very good;" perhaps we should not err in saying "best." The Clark Pear bears a good deal of resemblance in form, texture, flavor and seed, to the Autumn Bergamot of Col. Carr, described in the Transactions of the National Congress of Fruit Growers, for 1849, page 72.

From Peter Raabe—Four varieties of his Seedling Grapes. In 1845, Mr. Raabe obtained a collection of Grape Seed from Germany, which he planted in a bed in his garden. Many of these seed vegetated; and as the young plants were exposed, without the slightest protection, to the inclemency of the weather, none but the hardiest survived. Of these the following four have already fruited, and are unquestionably varieties of great merit:

The Brinkle—(Raabe's No. 1)—Bunch large, rather compact, sometimes shouldered; berry five-eighths of an inch in diameter; round; black; flesh solid, not pulpy; flavor rich, vinous, and saccharine; quality "best." Fruited in 1850 for the first time.

The Emily—(*Raabe's No. 2*)—Bunch large, not very compact, occasionally shouldered; berry below medium, from three-eighths to one-half an inch in diameter; round; pale red; flesh very juicy, with little or no pulp; flavor saccharine and delicious; quality "best," for an out-door grape. Fruited in 1850 for the first time.

The Raabe—(*Raabe's No. 3*)—Bunch small, compact, rarely shouldered; berry below medium; round; dark red, thickly covered with bloom; flesh very juicy, with scarcely any pulp; flavor saccharine, with a good deal of the Catawba aroma; quality "best." Although the Raabe originated in the same bed with the Brinckle and Emily, its unequivocal Catawba flavor and native leaf induce us to believe that it sprung from a chance seed of the Catawba that had accidentally gained admission into the bed. This opinion is strengthened by the fact that the Catawba was in bearing in Mr. Raabe's garden at the time he planted the seed he received from Germany. It fruited in 1850 for the first time.

The Clara—(*Raabe's No. 4*)—Bunch medium; not compact; berry medium; round; green, faintly tinged with salmon when exposed to the sun; flesh tender, juicy; flavor rich, sweet, and delicious; quality "best." Fruited the present season for the first time.

From Benj. Gulliss—*The Gorgas Peach*, two and one-half inches by two and three-quarters; roundish, with a slight prominence at the apex; dull greenish white, clouded and blotched with red on the exposed side; cavity wide, rather deep; stone free; flesh whitish, slightly stained at the stone, juicy; flavor saccharine and exceedingly luscious; quality "best;" period of maturity middle to end of Sept'r. This fine serrate variety originated with Benjamin Gulliss, N. E. corner of Pine and Schuylkill Eighth streets, from a stone of the Morris White, planted in 1846. It fruited in 1850 for the first time.

From H. B. Lindley, Athens, Ohio—Enormous specimens of an apple, labelled *Rhode Island Sweet*, but which we regard as *Lyman's Pumpkin Sweet*. Some of them were more than three inches long, and nearly four wide, and weighed 17 ounces; seed small, short, plump, oval; flavor sweet and pleasant; quality "good."

From Wm. Graham, gardener to the Philadelphia Blockley Almshouse—*The Graham Grape*; an accidental seedling raised by Mr. Graham. It sprung up in 1845, and fruited in 1850 for the first time. Bunch of medium size, shouldered, not compact; berry half an inch in diameter, round, purple, thickly covered with a blue bloom; contains little or no pulp, and abounds in a saccharine juice of agreeable flavor; quality "best." The leaf indicates its native parentage. It is probably a natural cross between the Bland and Elsinborough, both of which were in bearing in the garden where it originated.

From Abraham Wismer, near Norristown, Perkiomen township, Montgomery County—*The Perkiomen Shell-bark*. This is the largest variety of Shell-bark we have met with, measuring an inch and three-quarters long, one and five-eighths wide, and one thick, and with the hull on two and a half inches long, two and three-eighths wide, and one and seven-eighths thick; reversed oblong—cordate; shell thin; kernel of "best" quality.

From Wm. Canby, Wilmington, Delaware—more specimens of the delicious Seedling grape, described at the close of the ad interim Report for

September, and which we have since named *Delaware Burgundy*. We continue to entertain the same favorable opinion of its merits; and regard it a decided acquisition.

From *J. Fisk Allen*, Salom, Massachusetts—*St. Ghislain Pear*—Specimens remarkably fine and of unusual appearance; two and five-eighths inches long, and two and five-eighths inches broad; roundish, yellow with red cheek; stem three-fourths of an inch long, one-fourth thick, very fleshy; flavor fine; quality "very good."

From *Robert Buchanan*, Cincinnati, through *Hugh Campbell, Esq.*—very fine specimens of "six varieties of native Grapes."

Alexander, Schuylkill Muscadelle, or Cape Grape. Although this variety is of inferior quality for the table, the late *Mr. Resor*, of Cincinnati, made from it a superior wine, so similar to the *Constantia* as to be mistaken for it by some of our best wine connoisseurs.

Mammoth Catawba—Bunch large, shouldered, not compact; berry large, seven-eighths of an inch in diameter; round; of a deeper red, and larger size than the *Catawba*, but not so high flavored; quality "very good."

White Catawba—Bunch small; berry large, seven-eighths of an inch in diameter; round; greenish white; inferior to the *Catawba* in flavor and quality.

Venango—a seedling from the *Fox Grape*. Bunch of medium size; berry three-fourths of an inch in diameter; round: pale red, attractive in appearance; superior in the size of the bunch, and in quality to its parent; quality "very good."

Ohio, or Segar-box—Bunch rather large; berry below medium; five-eighths of an inch in diameter; roundish inclining to oval; specimens scarcely ripe. From this grape *Mr. Longworth* makes a wine of fine quality, closely resembling in flavor the *Spanish Manzanilla*.

From the *Rev. S. C. Brinckle*, Wilmington, Delaware—*Bonne de Zee*—Size full medium, two and a half inches long by two and five-eighths broad; roundish; cinnamon russet, interspersed with patches and irregular markings of fair yellow; in which respect, it bears a striking analogy to the exterior coloring of the *Uwchlan*; stem three-fourths of an inch long, and two-ninths thick, inserted in a narrow, superficial cavity; calyx medium, set in a moderately deep, even basin; flesh fine texture, buttery, melting, flavor delicious; quality "very good," if not "best." These specimens differed in form and color from the *Bonne de Zee* we have more than once received from Boston, which was yellow and obovate.

(To be continued.)

MARYLAND HORTICULTURAL SOCIETY.

This Society held their annual exhibition at Carrol Hall, on the 27th, 28th, and 29th, of September. The display of flowering plants and vegetables was very superior—fruit was deficient in quantity. An assortment of pears from *S. Feast & Sons*, comprised several superior specimens.

Grapes from *J. Standemeyer*, gardener to *Geo. Brown, Esq.*, grown under glass, were highly creditable. As usual here the display of native grapes was very extensive. But neither were they so well flavored or colored as they have been shown heretofore, with the exception of *Isabellas* from *G. Brown, Esq.*, these were very superior.

The following are the awards of the Committee :

Best six bunches Isabella grapes, J. Standemeyer, gardener to Geo. Brown, Esq., 2nd. Capt Pracht.

Best six bunches Cawtaba, W. C. Wilson, Esq., 2nd. F. J. Fuss, Esq.

Best six bunches Madeira, Mrs. J. Albert, 2nd. W. C. Wilson.

Best display native grapes, W. C. Wilson.

Best three bunches Black Hamburg, Capt Pracht, these were grown in the open air, 2nd J. Standemeyer.

Best display foreign grapes, J. Standemeyer, 3rd. Thos. V. Brundige, 3rd. Robert Gibson.

Best display of pears, S. Feast & Sons; among others were superior fruit of Vicar of Winkfield, Winter Nelis, Van Mons, Beurre Gris, Dutchess d' Angouleme, Bezy de Montigy, Doyenne de Alençon, Passe Colmar, Duc de Bourdeaux, &c.

Best half peck of pears, Charles Klasson, White Doyenne.

Best Doz. Mrs. J. Albert, 2nd Pentland, Bro.

Best doz. Plums, Mrs. J. Albert.

Best Figs, W. C. Wilson, 2nd. Mrs. H. Easter.

Best Cantelope melons, John Regester, 2nd. W. M. Lushby.

Best Water-melons, John Regester.

Discretionary premiums were awarded to Mrs. B. Whitely, for Peaches, Hon. S. Walker, Roxbury, Mass. for Pears, E. Kurtz for Pomegranates and Capt. J. Hugg, for Zante currant grapes.

Vegetables were superb, considering the severe drouth of the past season.

In general competition the awards were given for the best bushel of Potatoes to O. Kemp, gardener to Miss Tiffany, 2nd. Whittemore & Bro.

Best new var. potato, C. Campbell, gardener to Dr. Edmondson.

Best dish Lima-beans, C. Campbell, 2nd. Whittemore & Bro.

Best Carrots, D. K. Lushby, 2nd. Whittemore & Bro.

Best Salsify, D. K. Lushby, 2nd. Wm. Lushby.

Best Onions from seed, Wm. Saunders, gardener to Mr. Winans, 2nd. Whittemore & Bro.

Best Red Cabbage, Hamilton Easter, 2nd. C. Campbell.

Best Lettuce, D. K. Lushby.

Vegetable marrow, H. Easter, 2nd. J. Standemeyer.

Best Turnips, John Regester, 2nd. Whittemore & Bro..

Best Celery, James Galbraith, gardener to J. Ridgely, Esq.

Best Egg-plants, D. K. Lushby, 2nd. J. Galbraith.

Best Tomatoes, D. K. Lushby, 2nd. Wm. Lushby.

Best Corn, C. Campbell, 2nd. Whittemore & Bro.

Best Pumpkins, O. Kemp, 2nd. Whittemore & Bro.

Best Crookneck Squash, Whittemore & Bro., 2nd. John Regester.

Best pickling Cucumbers, S. Feast & Sons, 2nd. C. Campbell.

Best Parsnips, W. Saunders, 2nd. D. K. Lushby,

Brocoli, D. K. Lushby.

Kohl Rabi, C. Campbell.

Pepper, Whittemore & Bro.

Amateur Premiums—Best Beet and Cabbage, C. Campbell.

Best display of Vegetables, C. Campbell, 2nd. Hamilton Easter, Esq.

Gardeners Premiums—Best Beet, D. K. Lushby, 2nd. Whittemore & Bro.

Best Cabbage, J. Regeester, 2nd. Wm. Lushby.

Best display of Vegetables, 2nd. Whittemore & Bro. 3rd. D. K. Lushby.

Plants and Flowers—Best twenty-four greenhouse plants, C. Campbell, gardener to Dr. Edmondson, for large specimens of *Hoya carnosa*, *Crinum amabile*, *Astrapea Wallichii*, *Bonapartea juncea* in flower, *Gardenia amonae*, *Rhyncospermum jasminoides*, *Stigmaphyllon ciliatum*, *Cactus pereskia*, Coffee, Tea and Pepper plants, Loquat and bitter and sweet Orange Trees, with other valuable large specimens. Second, Wm. Saunders, gardener to T. Winans, Esq., for *Epacris impressa*, *E. Copeii* and *E. palludosa*; *Ericas Bowei*, *intermedia*, *versicolor*, *rubra* and *verticillata*, *Begonias manicata*, *sanguinea*, *hydrocotylefolia*, *odorata* and *fuchsoides*, *Russelia juncea*, *Burchellia capensis*, *Veronicas Speciosa*, *Andersonii* and *Lindleyana*, *Achimenes grandiflora*, &c. Third, S. Feast & Sons—best twelve new and rare plants, 1st. John Feast, with *Gardenia tubiflora*, *Hoyas mollis*, *imperialis* and *picta*, *Stephanotis Thouarsii*, *Echites picta*, *Ceropegia elegans*, *Plecthranthus picta*, *Bougainvillea spectabilis*, *Hovea Manglesii*, *Bauera rubiodes*, and *Dipladenia urophylla*, 2nd. S. Feast & Sons, who had *Gardenia Stanleyana*, *Rhododendron Dalhouseanum*, *Alloplectus Speciosa*, *Combretum grandiflorum*, *Hoyas imperialis* and *cinnamomifolia*, *Chirita Moonii*, *Quisqualis sinensis*, *Allamanda Schottii*, *Cyrtoceras multiflora*, *Clerodendron sinuatum* and *Achimenes Longiflora alba*. 3rd. Mr. John Feast, for a lot of *Commersonia rugosa*, *Phyllica imbricata*, *Adamia cyanea*, *Calladium bicolor*, *Correa Harrisii*, *Passiflora amabilis*, *Anthoceres speciosum*, *Alloplectus speciosus*, *Combretum macrophyllum*, *Posoqueria longiflora*, *Prostanthera rotundifolia* and *Clematis indivisa lobata*.

Best twelve Roses in pots, Pentland & Bro.

Best seedling rose to the same for a fine Noisette.

Best twenty-four cut blooms roses, Mr. John Tuomay, 2nd. Pentland & Bro.

Best twenty var. dahlias, W. C. Wilson, 2nd. J. Galbraith.

Best twelve dahlias, O. Kemp, 2nd. S. Feast & Sons.

Best seedling dahlia, J. Galbraith.

Best six var. *Achimenes*, J. Standemeyer, 2nd. S. Feast & Sons.

Best Balsams, Mr. Fuss.

Best Asters, Mr. Kurtz, 2nd. Mr. Sharp.

Best display of Verbenas, W. Saunders.

Best Tuberoses, J. Galbraith.

Best seedling Petunia, W. Saunders.

Best Phloxes, Dr. Edmonson.

Best Cockscombs, Mr. Sharp.

Mr. Levering sent in leaves of *Paulownia imperialis* that measured three feet by two.

For the best hand bouquet to Mr. J. Galloway, 2nd. H. Bosse, 3rd. S. Feast & Sons.

Best design for decorating the room, Mrs. Rodiewald, 2nd. S. Feast & Sons, 3rd. Miss A. Feast, 4th. Linnæus Feast.

Best table design of cut flowers, S. Feast & Sons, 2nd. Miss Kurtz, 3rd. S. Feast & Sons.

Best basket of flowers, S. Feast & Sons, 2nd. Miss Pigman, 3rd. Miss L. Feast.

Discretionary premiums were awarded for large and beautiful design not entered in competition to Pentland & Bro. For baskets of flowers to Miss Kurtz, and Mrs. Pentland, and bouquets to Miss Edmondson and Pentland & Bro. W^m. SAUNDERS, Cor. Sec'y.

ARBORIAL CURIOSITY.—The interest you take in trees, Mr. Editor, leads me to present to your cabinet of curiosities a note on a "curious curiosity." You have no doubt often seen trees with one trunk and two heads; but did you ever see one with one head and two trunks? You may have heard of one—the celebrated Welbeck oak, with an opening large enough to drive a carriage and horses through; but *that* was cut artificially for a wager. *This* is, for aught any one living can tell, a "natural case." On the road leading from West Chester to Marshallton in this State, is the White Hickory, probably three feet in diameter, which stands on two bases from three feet of the ground. Long heads and round heads have been equally puzzled as to the *how* and the *why*. M.

COLLECTANEA FRAGRARIANA.

Our present number contains a long article on this vexed question, almost sufficient of itself to form a treatise. Having promised the author space for another hearing, we could not well decline publishing it, which we should have done had we been apprised of its great length.

The importance of the subject to practical farmers will not warrant the use of so much space, particularly as it has now been narrowed down to a mere abstract point. It seems to be admitted all around, that a bed of pistillate varieties will not produce a full crop without the presence of staminate. This is not the question at issue, but whether, *under any circumstances*, a pistillate plant will vary its prevailing characteristics, be *liable* to become staminate or perfect, and *produce fruit*. On the one side it is contended this is *impossible*, and as *unnatural* as for a cow to turn into a bull, the pistillate or other peculiarity being the *fixed law* of its nature—its *true normal condition*. By fruit, in this connection, we understand to be meant what is usually called the fruit of the strawberry, (the receptacle containing the seed,) and not the seed itself, which is the real fruit. Leaving the fact, or otherwise, of this in the case of the strawberry, analogy would seem to settle it as neither impossible or improbable. The Maclura, a dioecious plant, produces the osage orange apple, or receptacle containing imperfect seed, many miles away from any staminate influence, and as Dame Nature is usually a consistent old lady, what she does once she may do again.

Neither will it be denied that the strawberry plant, in its normal condition, has perfect flowers, and there are *very many* analagous cases, of plants under a *change* of circumstances, reverting back to, or varying from their original character. This is no new fact in vegetable Physiology.

But when the very foremost champion of the fixed sexuality of the strawberry plant, voluntarily comes forward over his own signature, and gives up the *whole case*; and of his own accord, knocks away every prop of the plat-

form on which he and his friends have been contending, there is surely no use in further discussion in the *Farm Journal* or any where else.

N. Longworth, in a late number of the *Western Horticultural Review*, concludes an article as follows: "As Longworth's Prolific (which is hermaphrodite) produces a chance pistillate blossom, I see no reason for saying that there may not be a pistillate bearing an occasional hermaphrodite or staminate blossom." This admission covers the whole ground, and is exactly what T. Meehan has been assailed for asserting. One remark further, in conclusion, which simple justice to him seems to require. It is insinuated, and indeed directly asserted, that he had seen the article by W. D. before penning his own, and had copied the ideas from it. On the contrary, being accidentally on a visit to West Chester, he informed us that he had forwarded his article to the *Horticulturist*, and this was before the issue of the number of the *Farm Journal* containing W. D.'s essay. That their views should have been identical, is no more strange than that the views of scientific men should happen to agree on a scientific question when they are 2000 miles apart, and had never met.—*Farm Journal*.

Our *actual* opinion is this: that a pistillate by itself may, and often does produce fruit to some extent; but that to insure what is called a crop it is absolutely necessary to plant staminate near them.—*Ed. Horticulturist*.

"I have a pistillate strawberry flowering; there is not, nor has not for many months, been a staminate in flower on the premises, nor perhaps for twenty miles, and the fruit is swelling very well. I merely notice this as showing that fruit will sometimes swell independent of pollen. I always thought so, now I know it."—*W. S., Balt., Sept. 23*.

THE PENNSYLVANIA FARM JOURNAL.—This valuable and interesting magazine comes out this month under partly new management. Mr. J. M. Meredith having retired from the *Register and Examiner* will devote himself entirely to the publication of the *Farm Journal*. The circulation is deservedly very large, and we hope that it will still continue to increase. It is published at Westchester, Pa., at 1 dollar per annum.

Major P. R. Freas, of the Germantown Telegraph, has disposed of an interest in that paper to Mr. John C. Stoeber. We believe that the Telegraph is more largely circulated in the neighboring counties than any other paper. It is an excellent family paper, and the agricultural portion is conducted by Mr. Freas: no further recommendation is needed.

Through some unaccountable delay, on the other side, several plates which were shipped on the 31st. of May last have failed to come to hand. We are therefore, compelled to issue this number without one; the deficiency will be made up in the December number.

We again ask the attention of our delinquent subscribers to the bills which we mailed them some time ago; in most cases it has proved a mere waste of postage stamps.

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THE NILES

THE NILES







QUEEN VICTORIA.

THE FLORIST

AND HORTICULTURAL JOURNAL.

Vol. II.]

Philadelphia, December, 1853.

[No. 12.

ROSE QUEEN VICTORIA.

The Rose which we figure in this number is a seedling raised in France, and named in honour of his Queen by Mr. Paul, the celebrated English Horticulturist, who obtained the stock of the plant. M. Van Houtte, says of it that "it places itself in the first rank among Hybrid Perpetuals; nothing equals the softness of the colour of these large flowers so delicately shaded with rose on a white ground, and even the fact of its being less full than the Rose de la Reine, turns to its advantage, because it renders more easy the symmetrical opening of its flowers." The place of its nativity, whether near Paris or at Lyons is uncertain.

DESCRIPTION OF A NEW SPECIES OF THE PACANE NUT.

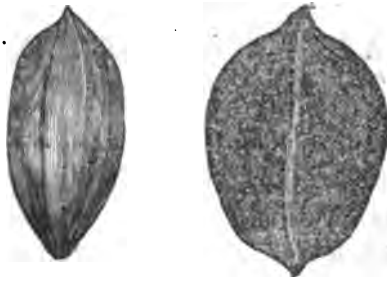
BY JOHN LE CONTE.

This species of *Hickorea*, which I found cultivated in Georgia, is a native of the State of Texas. The small altitude which it attains, the later period of its foliation, and the very different form of the nut, readily distinguish it from every other hitherto described. I have adopted Mr. Rafinesque's name, *Hickorea*, for the genus, in preference to Mr. Nuttall's *Carya*, on the ground of priority. Whatever may have been the errors or aberrations of Rafinesque, Nuttall was not justified in changing a name proposed by the former, years before any publication of his own.

HICKOREA TEXANA.—Tree about ten feet high. Leaves 13 inches long, frequently rather over than under this measurement, com-

posed of six or seven pairs of leaflets, scarcely petiolated, with a terminal odd one on a rather long petiole; leaflets lanceolate acuminate, the lower ones more convex on the upper than the lower edge, dentate on the upper edge from about one third the distance from the base; the lower edge is always most entire, except a few small teeth near the point. The terminal leaflet is dentate on both edges, but not near the base; nut somewhat ovate, pointed at the upper extremity, less so at the lower, flattened, somewhat rough, and slightly angled; 14 inches long, one inch broad.

Differs from *H. olivæformis* or common Pacane nut, in being a much smaller tree, seldom being more than 10 or 12 feet high, whilst the other frequently reaches to 80 or 90 feet; in the smaller size of the leaves, which rarely exceed 14 inches in length, the leaflets being 4 or 5 inches long, whilst the *H. olivæformis* has the leaves from 19 to 20 inches long and the leaflets 7 inches; but most peculiarly in the shape of the nut; this, in our species, is ovate, flattened, although protuberant on the sides and rough; in the other very smooth, cylindrical, pointed at each end. The leaves of the *H. olivæformis* are fully formed before this species shows the least sign of foliation.



H. OLIVÆFORMIS.

H. TEXANA.

From the proceedings Acad. Nat. Sci.

STRAY THOUGHTS ON GRAPE CULTURE.

When Mr. Chorlton announced his work—"The Cold Grapery," we felt much disposed to bring up a *cui bono* argument on the subject. *What good* thought we, to write another full treatise on a subject so simple, and which every one who has a grape vine *thinks* he understands? But the past season has dispelled all doubts of that kind; the late exhibitions have told another tale; the miserable apology for "luscious grapes," which we find every where through the country, with a few worthy exceptions, have demonstrated that Chorlton's treatise, or a treatise of some kind, should be in the hands of the majority of those who now attempt to grow grapes. The reason given for the falling off in New York is, that the atmospheric conditions necessary to perfect culture have been imperfect during the past season; but, as some few grape growers there have been as successful as formerly, the atmosphere can have had little to do with the inferiority of the others. In Pennsylvania, judging by the specimens from many parts exhibited at its meeting, the same inferiority was observable. There was, it is true, a larger display, and the bunches on the average were larger than last year; some Black Hamburgs reaching the perhaps hitherto unparalleled weight of five pounds eight ounces each. But in the main essentials of a well grown grape, color and size of berry, the display was more deficient than we ever noted any one before. That no atmospheric causes effected this was apparent from the fact that some few bunches were perfect and these too, frequently from the same locality as the badly colored ones; and indeed every experienced horticulturist knows, that this has little to do with the coloring of grapes, whatever it may have to do with their ripening; and that in management alone the great secret lies. We have, indeed, heard it argued, that color is merely *fancy*; and that grapes badly colored, if they are larger, and better flavored than others of the same kind, are really superior, and should be awarded so. This if subjunctive is too often taken for the positive. In all our experience—and this has been "some"—we have not yet met with that "Red" or "White" Hamburg, the flavour of which equalled the *genuine*. We have certainly met with them sweet and eatable, resembling thickened honey, or half frozen ice cream; but having that inexpressible "lusciousness" of a real perfect grape—never. We have often been deceived into pronouncing a badly colored grape fine, when no opportunity afforded for immediate comparison; but not in a single instance where that could be made—mere size is soon overruled; for that without flavor, should only be tested by judges who are hungry.

We fear no material objection in stating that as a rule, badly colored grapes, though famous for their obesity, are but the products of diseased

vines. Many causes may produce this disorder, and no one in particular; over cropping is a fruitful source of evil; although that term is one which it would take a whole treatise in itself to explain—a healthy, vigorous vine, with strong luxuriant roots, will safely bear to perfection double the crop that a poor scrub with half rotten roots will do. We have seen the most scanty crop of grapes, ill colored, while, on the other hand, we have seen crops on an old vine, which had fine vigorous roots, feeding on the water of a neighboring pond and *not* slaughter house drainings, bear crops that most gardeners in these days would think “tremendous,” and yet most perfectly colored. The greatest aim in good grape growing should be to preserve every root, and encourage an abundance of them. The borders should be drained to prevent injury from stagnant water; while they should not be made so dry as to allow the roots to get scorched in summer. It should be composed of materials favorable to the ramification of the fibres, such as a coarse turfy loam, having mixed with it a quantity of coarse silicious matter, or broken bricks, soft stones or even lime rubbish. It should be enriched with materials lasting in their tendency, and not having the property of turning ultimately into a “slimy, gelatinous mass.” It should not be cropped, or get an annual digging, but every year get a fresh but moderate dressing of manure, and every precaution taken to encourage the fibres to keep as near the surface as possible. A good supply of roots affords a firm foundation upon which to build ones future hopes; but this is but the beginning of the end. Roots are injured by other causes separable from the border. Severe summer pruning; an insufficiency of light and air to the wants of the foliage, and, probably, some other causes; have more influence on preventing an abundant production of roots than many would be disposed to admit. But I can do no more in this paper, than thus briefly allude to them. The reader follow them up for himself, once fairly on the track.

The result of this care for the healthy luxuriousness of the vine, will be fine, well ripened wood in the fall—such wood as can be made at any time to produce full crops of plump cheeked, chubby faced looking berries, with the rich, full colored hue which they should ever bear; without caring a fig for the “atmosphere” outside, unless it brings with it the notorious *Oidium Tuckeri*, as they have odiously dubbed the French vine mildew. *

MANAGEMENT OF CIDER APPLE TREES.

Choice of the Situation and Soil for a Nursery.—The situation of a nursery should be sheltered from high winds, but at the same time it should not be so near any plantation of large trees as to be in danger of its soil being invaded by their roots. If the soil at our disposal is argillaceous, compact, and generally sloping towards the south, that situation is the best of any; but if the soil is light and dry, a level surface, with a northern exposure, is to be preferred. In strong land, having a flat surface, and a clayey or impervious subsoil, the trees become infested with lichens or moss; in sandy or gravelly soils they languish, and in many cases the extremities of the shoots die off every year; whilst they are subject to chlorosis (yellowness) in soils that are too calcareous, that is to say, containing much chalk or carbonate of lime. From what has been stated, it will appear that the nature of the soil and aspect are not matters of indifference with the regard to the success of a nursery. When the trees from a nursery are intended to be planted in its own neighbourhood, the fittest soil to establish it on is that which approaches nearest in its nature to that of the greater part of the ground in the locality, because the young trees will not find any change in the elements of their nutrition when they are transplanted, and this greatly assists their taking root. For a seedling nursery, a soil rather light than strong is generally preferred; but for a training nursery, land which has a greater degree of tenacity, or that contains a greater proportion of clay than of sand, is the most proper; if it is not calcareous the addition of marl would be beneficial.

Having made choice of the situation, we must proceed to trench the whole of the ground. This operation should be performed at a dry time of the year, such as August, September, or October, in order to avoid spoiling the ground by working it when wet. The surface should be left rough, that the ground may be ameliorated by exposure to air and light and that it may become more friable.

Fourteen to sixteen inches is a sufficient depth for the trenching of a seed nursery, because the plants do not remain long in it; twenty inches would be a good mean for a training nursery, for if the trenching were very deep it would cause the trees to become tap-rooted, and they would not readily take root when transplanted.

Whatever be the depth adopted in trenching, the different layers of earth should be mixed, in order to obtain a soil as nearly homogeneous as possible; but if we operate on pasture land the turf should be placed at the bottom of the trenches. Compost and manure should be employed with discretion when they are judged necessary. Animal and vegetable manures, reduced

to the state of a finely divided mould, or humus, suit the seedling nurseries perfectly well, because these moulds, being plentifully spread and well incorporated with the soil, to the depth at which the seeds should be sown and put forth their roots, facilitate, and even induce, quick germination and a more satisfactory development. But a training nursery should not be thus treated. Manure, especially hot stable dung, should be only very sparingly applied, because nothing has a greater tendency to produce cancer on young Apple trees than too rich, too highly manured, or too moist ground.

Although there may be no advantage in raising the Apple trees ourselves which we intend to put into the nursery, and although we may often do better by purchasing the quantity of plants that is required, still we think it necessary to say a few words on the manner of sowing the seeds, because some persons have plants from vigorous trees, which are in various respects remarkable, and from which they hope to obtain good varieties, with the view of advantageously replacing those that become more and more diseased and unproductive.

Preparation and Sowing of the Pips.—The pomace of Apples is taken and rubbed between the hands in a tub of water, so as to separate the pulp from the pips. After allowing the water to remain a short time to settle, the contents of the tub or other vessel are poured off, so as to get clear of the pomace and bad seed. The pips that are at the bottom of the vessel are the only ones that should be made use of. They should be well dried, and kept in a dry place till they are sown. The sowing should be made immediately the hard frosts are over, because the seed of the Apple, like that of the Pear, does not long retain its germinating power.

The ground having been well prepared, divided, and sufficiently manured with decayed manure, drills are made about one inch in depth, and from seven to nine inches apart. (The plough and harrow are not employed in these sowings, except when they are made on a very extensive scale, as in some communes of Rumois.) The seeds are then put in the drills, and are covered by a rake. If the ground is dry, it is made firmer with the roller or the back of a spade.

We may also sow broadcast, but weeding is performed with greater difficulty; and the stirring of the soil, which is so beneficial and easy in the rows, is nearly impossible in broadcast sowings.

In whichever way the sowing has been made, the ground, if of small extent, should be covered with decayed manure, or with fine litter, so as to keep the soil moist, and prevent the surface from drying and cracking. We may sometimes succeed by merely spreading the pomace upon the ground, to

which it serves as a dressing, and forking it in, together with the pips it contains.

When the young plants are some one or two inches high, the weakest are thinned out, if possible, in the evening before rain; but failing that, the ground should be watered, in order to consolidate it about the roots.

The culture, during the growing season, consists in weeding and frequent stirring of the ground, in order to keep it loose.

When the plants are one year old they are chosen for the training nursery; for Apple trees selected at that age are preferred to older ones.

Transplantation and Choice of the Plants. In order to obtain the plants with all, or nearly all, their roots, an open trench must be made. The strongest should not be pulled up by the hand, as is frequently the case, because a part of the roots would be broken and left in the earth. In general the plants should not be taken up until we are ready to plant.

At the same age, the stoutest plant, not the tallest, is the best, that is, one which has the best roots and that has had the most air and light in the nursery, because not having been crowded and drawn up by its neighbours, such plants have thicker and stronger stems, their roots are also more numerous and spreading. This shows us that it is hazardous to sow too thickly, as the plants produced would be slender and uprooted with lateral roots.

THE TRAINING NURSERY.—*Time of planting, preparation of the roots.*—*Distance between the plants.*—In light soils, as well as in those of moderate tenacity, planting should be performed immediately after the leaves have fallen in November, or the beginning of December; but in argillaceous soils which require to undergo the ameliorating effects of frost and thaw, it is considered preferable to plant in February or March, as the excess of wet in winter might prove injurious to the roots.

The preparation or dressing of the roots consists in shortening them a little, and also in taking off the extremity of the tap root, if there is one.

The distance between the plants should be the same every way; but the necessity of turning the soil to account, and maintaining an easy access between the rows, as well for air and light as for the workmen, generally causes more space to be left between the rows than between the plants in the row.

As the rearing of Apple trees, till fit for planting out, usually occupies from eight to nine years, forty inches between the rows and from twenty to twenty-four inches between the plants in the rows, appear to be sufficient. By this arrangement, air and light penetrate much more easily along than across the rows. In determining the direction of the rows, the nature of soil should also be considered. In light soils, where it is requisite that the trees should protect each other from drought and from the heat of the sun, the direction of the rows should be from east to west; whilst in wet cold soils, the rows should run from north to south, in order that the noon-day sun may penetrate between them and warm the ground.

Mode of Planting.—Having traced the direction of the rows, we proceed to plant either with the spade or dibber. Planting with the dibber is only suited to plants having tap-roots. The spade is in every respect preferable; it allows us to lay the roots in their natural position, and to cover them with the finest of the earth.

Unless the stem is very tall and slender, it is never shortened the same year that the transplantation takes place. In this case, the third of the

stem, or one half at the utmost, is cut off, in order that it may grow upright; but at the same time a sufficient number of buds is left to produce plenty of leaves, as these encourage the tree to take root by elaborating the sap for the production of numerous small roots. *Gard. Chron.*

PERMANENCE OF VARIETIES.

The species of plants, like those of animals, appear to be eternal, so far as anything mundane can deserve that name. There is not the smallest reason to suppose that the Olive of our days is different from that of Noah; the *Asa dulcis* stamped upon the coins of Cyrene still flourishes around the site of that ancient city; and the Acorns figured among the sculptures of Nimrod seem to show that the same Oak now grows on the mountains of Kurdistan as was known there in the days of Sardanapalus. There is not the slightest evidence to show that any species of plant has become extinct during the present order of things. All species have continued to propagate themselves by seeds, without losing their specific peculiarities; some appointed law has rendered them and their several natures eternal.

It would seem moreover that, with the exception of annuals and others of limited existence, the lives of the individual plants born from such seed would be eternal also, if it were not for the many accidents to which they are exposed, and which eventually destroy them. Trees and other plants of a perennial nature are renovated annually; annually receding from the point which was originally formed, and which in the nature of things must perish in time. The condition of their existence is a perpetual renewal of youth. In the proper sense of the word decrepitude cannot overtake them. The Iris creeps along the mud, ever receding from the starting point, renews itself as it advances, and leaves its original stem to die as its new shoots gain vigor; in the course of centuries a single Iris might creep around the world itself, if it could only find mud in which to root. The Oak annually forms new living matter over that which was previously formed, the seat of life incessantly retreating from the seat of death. When such a tree decays no injury is felt, because the centre which perishes is made good at the circumference, over which new life is perennially distributed. In the absence of accidents such a tree might have lived from the creation to this hour; travellers have even believed that they had found in the forests of Brazil living trees that must have been born in the days of Homer. But here again inevitable accidents interfere, and the trees are prevented from being immortal.

Species, then, are eternal; and so would be the individuals sprung from their seeds, if it were not for accidental circumstances.

But plants are multiplied otherwise than by seeds. The Hyacinth and the Garlic propagate naturally, not only by seeds, but also by the perpetual separation of their own limbs, known under the name of bulbs, their bulbs undergoing a similar natural process of dismemberment; and so on for ever. The Potato plant belongs to the same class. Another plant bends its branches to the ground; the branches put forth roots, and as soon as these roots are established the connection between parent and offspring is broken, and a new plant springs into independent existence. Of this we find fa-

miliar examples in the Strawberry and the Willow. Man turns this property to account by artificial processes of multiplication; one tree he propagates by layers, another by cuttings planted in the ground. Going a step further he inserts a cutting of one individual upon the stem of some other individual of the same species, under the name of a bud or a scion, and thus obtains a vegetable twin.

It is not contended, for there is nothing to show, that these artificial productions are more short-lived than either parent, provided the constitution of the two individuals is in perfect accordance. There is not the smallest evidence—it has not been even conjectured—that if a seedling Apple tree is cut into two parts, and these parts are reunited by grafting, the duration of the tree will be shorter than it would have been in the absence of the operation.

It is nevertheless believed by many that the races of some cultivated plants have but a brief duration, provided they are multiplied otherwise than by seeds. No one indeed pretends that the Garlic of Ascalon has only a short life, although it has been thus propagated from the time when it bore the name of Shummin, and fed the laborers at the Pyramids; nor do we know that the bulb-bearing Lily has been supposed to have less inherent vigor than if it were multiplied by seeds instead of bulbs. It is only among certain kinds of plants that exceptions to the great natural law of vegetation are supposed to exist. It is thought that although the wild Potato possesses indefinite vitality, yet that the varieties of it which are brought into cultivation pass their lives circumscribed within very narrow limits; and the same doctrine has been held concerning fruit trees. The great advocate of this view, the late Mr. Andrew Knight, rested his case upon the disappearance of certain kinds of Apples and Pears, once to be found in the orchards of Herefordshire, but now no longer to be met with. This he ascribed to cultivated varieties being naturally short-lived, and to an impossibility of arresting their gradual decay by any process of dismemberment; and following out this theory he strongly urged the necessity of renewing vitality by continually raising fresh varieties from seed. It is difficult to comprehend what train of reasoning led to this speculation. We know that wild plants may be propagated by dismemberment for an indefinite period; we know that when such wild plants spring up from seed the dismembering process still goes on and still without exhibiting symptoms of exhausted vitality; and yet if a plant grows in a garden, and is brought under the direct control of man, the power is thought to be lost, or so much impaired that indefinite multiplication no longer becomes possible. Can this be true? Most assuredly the cases adduced in support of the doctrine are susceptible of another explanation, perfectly consistent with the general laws of vegetation.

That renewal by seed will not restore what is called exhausted vitality, was sufficiently proved by the experiments with Potatoes after the blight made its appearance. We were assured by an ingenious writer in one of the daily papers that the constitutional power of the Potato was on the decline; in other words, that the lives of individuals was approaching their end; that the blight arose in consequence, and that a certain remedy would be the renewal of the existing races by sowing seeds. Hundreds joined

eagerly in what proved to be the vain pursuit. A worthy armorer at Solingen even published an elaborate pamphlet in support of the idea. *Nein mehr hungersnoth*—no more famine—was his audacious motto—a prediction wofully falsified by the result, for the seedling Potatoes were, if possible, more diseased than their parents.

So many persons, however, disregarding what we presume to think the preponderating weight of evidence to the contrary, still continue to look upon the question as one open to further discussion, that a learned German Scientific Society has determined to make it the subject of farther and more elaborate examination.

A committee appointed under the Demidoff foundation in Berlin, has just announced that a prize of 30*l.* (200 thalers) is offered for the best essay upon the duration of life in plants propagated otherwise than by seed. The question to which competitors must address themselves may be thus freely translated :—"Is the life of an individual plant, in its widest sense, that is to say, of a plant itself raised from seed and then propagated otherwise than by seed (by cuttings, layers, buds, grafts, &c.), unlimited in duration, and destructible only by accidental or external unfavorable circumstances, before the extinction of the species itself? or is the life of such an individual limited, and to a certain definite extent shorter than the duration of the species?"

Competitors are expected to give, in addition to any unpublished cases, the fullest possible collection and examination of published facts relating to the degeneracy or total extinction of seedlings, preserved and propagated otherwise than by seed, and more particularly of seedling fruits cultivated in Europe, viz., Apples, Pears, Quinces, Medlars, Plums, Cherries, Apricots, Peaches, Almonds, Figs, Mulberries, the different kinds of Orange, Olives, Walnuts, Filberts, Grapes, Gooseberries, Currants, Raspberries, and Strawberries; and the sources from which the facts are taken must be stated. Attention must also be paid to the circumstances under which the degeneration of the plants reported on occurred; the climate and soil in which they grew, the treatment and care they received, so far as these can affect the answer to be given to the question, and any evidence relating to them which can be found.

It is announced that the essays for the prize may be written in English, French, German, Italian, or Latin, and must be delivered before the 1st of March, 1854, to Dr. NEES VON ESENBECK, the President of the Academy of Naturalists at Breslau. Each essay must have a motto prefixed, and in an accompanying envelope the name of the writer must be given. The result of the award is to be made known in the *Bonplandia* newspaper of the 17th June, 1854, and the successful essay will be printed in the *Transactions of the Academy Naturæ Curiosorum*. Full particulars will be found in the *Allgemeine Gartenzeitung* for the 30th July, of the present year.

Since it is obvious that no special experiments can now be instituted for the purpose of testing this theory, the attention of the essayists will necessarily be confined to a diligent accumulation of evidence, and to the conclusions which it renders necessary. We dare say the proposal will find respondents among men of leisure who have access to large libraries, and we venture to hope that they will be able to settle so vexed a subject. We trust they will take care not to confound the duration of natural seedlings with that of vegetable mules, which is a wholly different question.—*G. Chron.*

NEW BRIGHTON, STATEN ISLAND, }
November 14, 1853.

Mr. HANSON—

DEAR SIR:—I do not wish to enter the arena of public warfare now being so fiercely waged on the vexed strawberry question, but when I see so much assertion, without the least shadow of a scientific proof, being so strongly advocated by the firm of Longworth, Prince & Co., I cannot refrain from recording an example which has come under my own observation. What a "mare's nest" have they discovered and what has it brought forth but "moonshine?" It is a pity that these gentlemen with all their experience and practice, should not have observed a little closer the action of nature's laws, and been more susceptible of conviction, instead of abiding so closely by the argument, "It is so, because it is." Had they made the same use of their brains as the immortal Linnæus did, they would have known before this, that a pistillate strawberry might be made under favorable influences to produce stamens, but—

"A man convinced against his will,
Is of the same opinion still."

and it appears to be the case with them.

However faulty and prejudiced the English character may be generally, there has been no cause for accusation in this matter; and it adds nothing to the credit of men who move in so respectable a position, to be retorting upon nationality when discussing matters relating to science. Their own vindictiveness proves their want of argument, and if their foundation was safe they would not be writing their own burlesque.

It is to vegetable physiology and experiment that we must go for proof, and Mr. Meehan has done nothing more, neither did he in the beginning record anything but a simple explanation of the results of his own experience and conviction, founded upon the above basis, and my own observations bring me to the same conclusion. In proof of these statements, allow me to record the progress in blossoming of a bed of strawberries for the last three years at this place. The variety was obtained from a reliable source for Hovey's Seedling, but for the present purpose it matters not what the kind is, I only wish to show that sexual fixedness is not so certain as our friends would have us believe, but under certain influences is likely to alter. During the season of 1850, this bed of strawberries did not suffer from drought, nor much by scorching from the sun, and the season after, viz. 1851, the blossoms were nearly all hermaphrodite, during the same summer they were much injured by drought, the growth was more stunted, and the season after (1852) they were all pistillate *without exception*, this same summer the growth was somewhat less injured by dry weather, and the last season (1853) there was at commencement of blooming, a more than equal share of hermaphrodite blossoms, as blossoming advanced the pistillate became more numerous until at last nearly all were so, during this time the weather became very scorching and they were purposely left unwatered. I had ocular demonstration of these various changes, which were watched with much interest.

Now let us turn to a physiological view of this same subject. The first movement of vegetable action in spring is, merely a development of those

parts which were formed the fall previous, the various parts thus formed swell out and expand by the vital action of the plant, and the aid of heat, light, and moisture, and according as steady and healthy concentration accumulated until all these parts were perfected previous to expansion, so will be the perfectness in formation of each individual part, and vice versa. If we take the generality of flowers, those which are perfect contain both male and female organs in a healthy state, and the *Strawberry comes under this division*. We know that there are many exceptions to this rule, but in some of these there are often hermaphrodite flowers produced. As growth progresses these developed parts begin to act for themselves, true growth is formed, and fresh stores laid up for future expansion. This after growth all tends towards a central point, as is proved by each individual leaf or flower bud. In the flower, which is nothing more than a bundle of leaves more highly concentrated, it is more conspicuous, we find the calyx encircling the corolla, which in its turn surrounds the stamens, the stamens enclose the germ, which contains the embryo seed, and which afterwards by the same action as the whole plant is endowed with, becomes a perfect bud only in a more highly organized state than those which form leaves; I mean here the true seed, not the receptacle which is nothing but the collected juices retained, instead of as in the case of leaves are returned to the structure of the plant, thus adding to its bulk. A healthy and well stored growth produces all these parts in proper order and perfect; but if the climate be too hot and dry for any individual family, this perfect action is interfered with and the consequence must be, a deterioration of some or all of the parts, which will show itself in smaller calyx, petals, stamens, and pistils, if not entirely subdued, or render abortive some of them. This is clearly shown in the Strawberry, and particularly in the changeable example above given, for in the pistillate flowers there are smaller petals, and although the stamens are present, they are only rudimentary. This centralizing principle is less likely to affect the pistils than any other part of the flower, as it is the extreme point towards which maturation tends, but it is possible to carry the thing so far as to render even the pistils defective, and persevering in raising seedlings from pistillate sorts alone, would be very likely to bring this about. Our burning and fervid sun is properly speaking too hot, and the climate too dry for the strawberry, notwithstanding the great crops that are often obtained. The fruit is comparatively small to that of Britain, where there is more moisture and less heat during the growing season; these same circumstances account for the varieties raised there being almost without exception hermaphrodite. The crops there are greater if weight and bulk are taken into account, and not so acid as with us. A strawberry is considered of great size here if five or six inches in circumference, while a parallel there would be from seven to eight, and they are occasionally produced nine inches; and they require no sugar to correct the sourness. Indeed (with the exception of a few of the best flavored varieties) such as are mostly grown here would only be considered fit for boiling as a preserve.

I do not wish to detract from the excellence of American Strawberries, as the difference in quality is the result of climate; neither would I contend that the British sorts prove better here than natives, if so good; but I

do say that gentlemen of ability ought to discuss a scientific subject without attempting to ridicule honest investigation.

Respectfully yours,

WM. CHORLTON.

James Gowen, Esq., the practical and scientific farmer of Mt. Airy in this county, lately made an address before the Mercer County Agricultural Society. He speaks from his own observation on the value of different kinds of stock—and is properly severe on humbugs. We copy his remarks on exhibitions.

Agricultural Exhibitions have ever been with me a favorite expedient, whereby a laudable emulation and rivalry might be promoted among the tillers of the soil; and to serve as a rallying point, where, in the presence of each other, they might learn to have more confidence in themselves, and by emulating the progress of others, snatch a spark of that spirit and enterprise, so luminous now-a-days, in the track of the busy throng, that are pushing along and going a-head with rail road speed. It grieved me to perceive that the farmers, as a class, seemed regardless of the position, however low or obscure, assigned to them; appearing ever content to labor unrequited and unhonored; complaining not, nor attempting to reverse the decree that fashion, folly and pretention had recorded to their prejudice. Such should not, I thought, be the condition of the farmer; his calling or profession is in itself so intrinsic and independant, that it seems strange (unless there is something in the soil with which he deals that deadens, or in the air he breathes, that bewilders his faculties), that he should not have the sense and spirit to stand more erect, and battle manfully for that lofty position, which is his rightful heritage?

To the husbandman, under Providence, is committed the bounties of the field and seasons, and upon his management depends, not only the wealth of the nation, but the daily sustenance of every man whether rich or poor, high or low. Plenty and scarcity, fulness and famine, in a great measure depend upon the foresight, skill and energy of the farmer; he holds the veritable cornucopia, and so long as it is found in condition of teeming fullness, pouring out the invigorating comforts of sustenance, so long does the human family wax strong, rejoicing in the enjoyment of health and vigor! Let it give but a partial supply, or none, feebleness and languor, famine and pestilence, brood over all and enshroud every living creature! Is there a man so obtuse or insensible, whether mechanic or manufacturer, merchant or professional man, as not to perceive how indispensable are the functions of the farmer? Why should he not be held as ordinarily intelligent, with percep-

tions capable of penetrating the hidden operations of nature, so far as they lie within his sphere of action; profiting by all that is deducible from, or observable in her teachings? And is it not a reproach to us, farmers, if we do not establish our claim to this high consideration, and prove that we are not the dull, unenlightened drudges we are supposed to be—good but so far as material strength may serve, to toil, with other working animals of the field!

Agricultural exhibitions are precursors of improvement—they are eminently calculated to arrest the attention of the apathetic—to break in upon the dull monotony that pervades the locality where the fair is held. They are as interesting as they are instructive, and never fail, if properly conducted, of impressing a salutary and abiding influence upon the minds of all who have participated in their interesting display and innocent recreation. Within their enclosures are to be found the best specimens of farm stock, the choicest varieties of seeds, samples of the best crops, improved implements of husbandry, specimens of household manufacture, butter, cheese and poultry; all arranged for the inspection of the curious, and challenging competition. Who can look upon such a scene and not be struck with a deep sense of its utility, and what farmer, however enlightened, but may add something to his stock of knowledge, or have his doubts removed as to the excellence of some breed of farm stock, or the capability of some implement, which he had never used, for the work it was designed to execute? And who can be insensible to the advantages of such an opportunity for an interchange of opinion upon the theory and practice of culture and husbandry; upon soils, and the adaptation of crops and manures to each variety respectively? These, with the friendly greetings, the revival of old acquaintanceship, and the formation of new friendships, give to the scene a holiday freshness—a dash of rural felicity, that compensates for many a long and solitary day of toil upon the farm.

FARMERS AND RAILROADS.

No wonder that Farmers dislike granting the right of way to Rail Roads. Mail Trains, Express Trains, Lightning Trains, fly through his grounds, smoking, steaming and screaming, as if in derision of him. Perhaps, an *accommodation train* comes along once a day, but it does not stop at his gate; no! no! He must go to the station three miles off or more, and be there rain or shine to the minute, and ten to one at the very hour, when instead of leaving home he ought to be returning to it; no great accommodation to him truly. If there be a station or water tank on his farm is he

better off? Not if he has an orchard. For Passengers and Brakemen, and Stokers, and Baggage-master, and Engineer and Conductor all agree on two points, 1st. That the Farmer's fruit is public property—2d. That *they are the public!* So they help themselves. If, because the switch-tender was sleepy, or a cow was on the track, or the Engineer didn't see the signal, or the track had spread, or a rail was misplaced, or a *screw was loose*, the train gets off the track, at midnight or in midwinter, the "nearest farm house" is entered as if it were an inn, and the farmer, "mine host." And if any of the *patrons* of his house or his orchard should forget to shut the gate or put up the bars, and thereby an unfortunate and confiding cow or two should stray on the track, and become a prey to that benevolent machine, shaped and armed like the lower jaw of an alligator, and very properly called a "cow catcher,"—who cares whose choice Devon, or Ayrshire or Durham is impaled? "The fellow ought to keep his fences up, and not endanger our lives and property," say the public. The engine snorts, and the groans and struggles of the creature's last agony are drowned in the noise of the passing train.

The right of way to steam, smoke and noise. When the Farmer grants this he grants also the right of colonization to his worst foes the weeds. In the broad band right through his possessions these enemies entrench themselves. Here a little fastness of the Iron-weed. There a camp of Canada-Thistles. Yonder a citadel of May weeds. Further on a stockade of wild carrots, and discontented colonists they are too. Regarding neither picket, "Virginia," post and rail, or any other fence, and the thorniest hedge as little. Perfect "filibusters" who "go it strong" for "extending the area of weed-dom." All they need, as Decatur said of his countrymen is an *opportunity*, and this comes along with every train. Mid the involucre of the Vernonia and the Carduus, on the receptacle of the Chrysanthemum and among the umbels of the Daucus do these adventurers lie in ambush. The whistle of the locomotive is the signal for the rising of these clans, nor were Roderich's more prompt to the call of their chieftain. The Engineer is more successful in "getting up a breeze" than either Lopez or Kossuth and away go the flying legions some to the forest and orchard, others to the lawn and garden. All who survive are sure to settle, "make a location" and ere long dispute with true squatter audacity, the Farmer's pre-emption right.

From Dr. Kennedy's address before the Montgomery County Agricultural Society.—Oct. 1853.

CINCINNATI, Nov. 13, 1853.

EDITOR OF THE FLORIST.

We differ in our views more than you suppose. You speak of Mr. Downing's having a change of a pistillate to a staminate plant. This change was in his bed of Hovey. To prove it he sent the plant to Boston, and Mr. Hovey and all the Horticultural Society pronounced it not the Hovey. I say a new pistillate seedling may be raised, bearing a few hermaphrodite blossoms, but I shall not believe in a change in the sexes by cultivation till I see it. If it can be made, Mr. Meehan will be entitled to the credit of discovering it. I do not say it is impossible. If true it has no bearing on the necessity of attention to the sexes in common culture. For twenty years, I kept beds of staminates and pistillates one-hundred yards apart, to make new beds from,—and never had a change.

In your present number you say "no one has said that a full crop can be produced without staminates being planted among the pistillates. I say that one thousand acres of Hovey's seedlings or any other pistillate will, if separated from all others never bear a *single perfect berry*. You say that the strawberry in its natural state is perfect in both organs. I say, that in their wild state, the same difference in their sexual character exists. Such I know to be their character in New Jersey, and in our Western States. I say, that Linnæus knew nothing of the sexual character of the strawberry. One of his disciples made the discovery and informed him. Linnæus told him to keep quiet as his plants failing to produce fruit was from frost, not a defect in the sexual organs. Mr. Keen was the next person to discover it. He raised a seedling that bore no fruit. On close examination he could see no male organs that were perfect. He placed his old seedling in the bed, and he had an abundant crop. He made the discovery known to the London Horticultural Society; it seems he was choked off, as the disciple of Linnæus was, for no notice was taken of it.

The Botanists of Europe for their present knowledge, are indebted to an illiterate German Gardener, once a resident of your city, and who here made a fortune by her knowledge. But for a chance remark of one of her sons the secret might have still been in her family. The persons name was Arbequit, for many years a strawberry grower at the Neck; and her neighbors informed me, that from the same space of ground, she grew five times the quantity of fruit that they did; that when she thinned out her beds she threw her plants on the road. They gathered them up and planted them but never could from them raise a single berry.

I am myself anxious that Mr. Meehan should sustain his position. He has the genuine McAvoy's superior; it bears no resemblance to any other kind; let him effect the change to the satisfaction of Dr. Brinckle and Mr. Buist, in

this variety and even Mr. Prince will become a convert, *rambunxious** as you deem him. But if Mr. Meehan should, which I do not believe, throw Prince on his back, I fear you will have a greater difficulty to encounter, and have nothing but the doctrines of Science and Linnæus to sustain you against the judgment of the illiterate German woman, and the evidence given in our thousands acres of the Strawberry in our wild prairies when you say "the Strawberry in its natural state has perfect flowers, is furnished with pistils and stamens; chance seedlings, produce, under a *high state* of cultivation, flowers in which the stamens are abortive. *Left to themselves* they return to their *natural condition of flowers with perfect parts*"

For facts are chieftains that winna ding
And downa be disputed,"

even by science.

Yours Truly,

N. LONGWORTH.

Our correspondent Mr. Longworth, has italicised his quotation from our remarks in the last number. We are willing to re-iterate them, even in capitals, if he wishes, and will let them stand until disproved. We contend that if a pistillate plant, which is a monstrosity, be left to itself, it will endeavor to perform the object of its existence, which is REPRODUCTION, and will develop the abortive stamens and thus become a perfect flower, which Mr. Longworth to the contrary notwithstanding, is its natural state.

* We are a little in doubt about the spelling of this word; but we think it should be *rambunxious*.

CALENDAR OF OPERATIONS.

FRUITS.

Strawberries—Should now receive a final dressing up for the season, by cleaning between the rows and forking in a layer of manure. A covering of short manure or tan bark will be necessary to preserve the more delicate and superior varieties. Where tree leaves are plentiful they answer this purpose admirably, throwing a sprinkling of soil over them to prevent displacement by wind. Tan bark has many advocates in strawberry culture. As a specific manure we would not trust much to its efficacy in any case, but as a mulcher in summer, and to protect tender roots in winter, its efficiency cannot be doubted. Plants in pots intended for an early crop should now be placed under cover. A glazed frame or the floor of a cold grapery would be the best situation for them, but any spare cover will do, so that they can be secured from wet and severe frost; opportunities should be embraced in removing all dead and decaying foliage, surface stirring and top dressing, preparatory to starting them into growth.

Raspberries—require good culture to produce abundantly, prune out all the old wood and thin out the present year's shoots to four or five of the strongest canes, securing all neatly to stakes. An application of wood ashes, and yard manure to the roots will be a means of improving the quality of the crops. It is a fruit well worthy all the care that superior cultivation can bestow on it. A somewhat sheltered situation, and deep, rich soil, but not wet, is most suitable to them.

Gooseberries—In pruning these, keep the center of the bushes well thinned out; they fruit best on young wood, a proper supply of which should be retained, but do not shorten them unless vigorous growth is desired. Black currants should be treated in a similar manner, thinning out the younger wood, and preserve a wide spread bush in the form of a cup, by keeping the centre clear of spray. A deep, rich, and moist soil is favorable for their healthy growth. A few cuttings of the young wood should be stuck in some cool corner, to keep up a succession of young plants.

Figs—will require protection; bend them down, securing them with stout pegs, and cover them with leaves, evergreen boughs, &c.,—they will stand considerable frost, but in severe winters the young wood will be injured and a crop destroyed. The winter of 1851-52 killed many large plants that had stood unprotected for years. A dry, rather poor soil favors this crop.

Grapes in houses should now be pruned and painted over with a mixture of tobacco water and sulphur, mixed with clay to the consistency thin paint. This will eradicate all insects and their eggs that may find a lodgement in the loose bark. Untie them from the rafters and lay them down in a horizontal position along the inside front of the house. They can be protected, if necessary, by a covering of straw, or leaves. The borders will also be benefitted by a layer of coarse manure, spread it on its surface—keep the house open and well ventilated, as long as weather will permit. In making new borders the most particular care must be taken in securing effective drainage. Nothing is so opposed to successful grape culture as wet soil. The chemical constitution of the soil may be regarded as only of secondary importance—we have seen good grapes grown in what was considered very poor soil, but it was well drained. Trench the soil two feet deep, incorporating four or five inches of good manure. Broken bones and charcoal dust are valuable correctives of strong soils, and may be used freely in such cases. Make a good substantial border, not by burying carcasses of animals, but by draining and trenching a good free soil, the organic requirements can be added from time to time, as may be found necessary and convenient.

Fruits—are plentiful in their season, but how to have them early and keep them late should be a question with amateurs. The latter subject was alluded to in last month's calendar. Many kinds of fruits may be had three or four weeks in advance of their usual season of ripening by growing them in pots and boxes, without entailing much trouble or expense. Peaches, Nectarines, Cherries and Figs are easily forwarded in this manner. Commence now with young plants, in suitable sized pots that will just admit the roots, plunge them in the open air, and cover with rough litter or leaves, to keep frost from cracking the pots. Early in spring they may be taken into a cool green house, or cold grapery, due attention must be given in syringing the tops, taking care not to overwater the roots until they com-

mence to grow. They can be shifted into larger vessels as they seem to require it, but good crops can be had in comparatively small pots by supplying them with liquid stimulants while growing and ripening a crop. The roots being thus placed under complete control, there is little danger of excessive wood growth, consequently they will be very productive.

Figs succeed well in this way, a poor soil suits them best, but as they require a good supply of water during growth, particular attention must be given to the drainage, that no stagnation of water take place in the soil. The ripening of young wood can be hastened towards the end of summer by a gradual withdrawal of water and exposure to the sun. S. B.

DECEMBER.

FLOWER GARDEN AND PLEASURE GROUNDS.—This month is usually considered as the most leisure one of the year to the gardener. But it is far from that. "Hours of Idleness" have no signification in his vocabulary. At this season, though perhaps called upon for less manual labor, his mind and reflective powers have to be tasked more than at any other. In the department under consideration, there is always food for reflection. Few Flower Gardens, especially in our country, are laid out in the first instance in the most perfect or tasteful manner. Every successive season will expose new beauties that were in the beginning overlooked. Many things must remain as they are, but much can be remedied, and often by a very small amount of labor or expense. In the alteration of the forms and shapes of flower beds, for example, great results can be easily accomplished. We have seen the most tasteless, and disagreeable objects of the kind, retained year after year, for no perceptible reason than that it was supposed to be "inmutably" perfect on its first conception. Apart from the pleasure which a nearer approach to the pure principles of taste gives in such cases, the very change itself will be agreeable. Novelty often pleases, so long as the change is not from a beautiful to one decidedly less so; and this species of novelty should receive as much attention in connection with our grounds, as with the introduction of beautiful exotics to our greenhouses. The past season will have disclosed many imperfect features; and the present could not be better employed, than in preparing these so as to be easily and speedily acted on when the proper season arrives. In the formation of regular sets of flower beds, or *parterres*, much difference of opinion exists as to the use of gravel or grass for the walks. If the beds are to contain flowers of many individual species, forming what is generally understood by the term "botanical flower garden," gravel walks with box edgings should be always employed, as they afford the best facilities for examining each plant separately; but where the flowers are to be grown in masses, and the effect is sought for in a distant view; the most pleasing results will flow from the bed appearing to be set in the grass, the green walks materially relieving the gaiety of the masses of blossom. In the proper forms or figures for flower beds, the same difference of opinion is found. Some being advocates of lines and angles, working them out into all kinds of shapes, triangular and hexangular; others being equally hard upon curved lines and circles. It is seldom indeed that any effort built entirely on one or the other of these principles pleases, and the situation or circumstances should

determine the proportion which the one should bear to the other. If the beds have to be formed in a rectangular or regular piece of ground, they will always have the best effect if those on the outside have linear outlines, the inner ones being made up of curves and portions of circles. If the ground be not formal, there is little danger of failure in an extensive employment of curved lines.

GREENHOUSE.—In our earliest recollections of a greenhouse at midwinter, the *Acacia* is inseparably connected. What have they done to be now so frequently neglected? A "greenhouse once we knew" in which over ninety species "waved their yellow hair," some one of them every month in the year, though for the most part in winter, and I have never yet seen a sight to equal it. They are of the easiest possible culture, will endure an extraordinary amount of neglect, being in fact the very donkies of the vegetable kingdom. I trust again to see these valuable plants in high esteem. In our vicinity we have but *A. pubescens*, *A. linearis*, *A. longifolia*, *A. affinis*, *A. dealbata*, *A. armata*, *A. verticillata*, *A. pulchella*, *A. Kermesina* (a stove species) and one or two others. There are many other fine old things which we are sorry to see displaced by worthless novelties. I would go a "good long way" for a sight of a well grown old *Eutaxia myrtifolia*, or *Pimelia decussata*, and brave the charge of "old-fogyism" in stating my preference for them than for a host of *P. spectabilis*, *Hendersoniæ*, *Verschaffeltiæ*, and so on. Soft wooded plants are very apt to be infested with *aphis* at this season—repeated doses of tobacco smoke will soon do for them. Some plants, *Heliotropes* for instance, often suffer in the operation. This is frequently caused by the absorption of moisture from the leaves, than from absolute injury from the smoke, and it is for the most part prevented by putting a small quantity of damp hay or moss over the burning tobacco, through which the smoke has to force its way.

HOTHOUSE.—It has become a grave study with many experienced horticulturists whether something cannot be devised to obviate the necessity of shutters for these structures. Were it a question of expense between the additional cost of fire without them, and their use, the former would have the advantage. It is a laborious task to put these on and off almost daily, besides their "wear and tear," breakage of glass, and other incidental inconveniences. The best that can be said in their favor is that the heat they keep in is better for the health of the plants than that supplied by an additional amount of fire. I think a "compromise" might be introduced in the shape of *glass shutters*. Now that the frame work can be made so cheaply by machinery, I think they might be made for the same price as those now in use. When once put on they need not be again removed till spring. There would probably be a shade less in the amount of light admitted by this mode, than by a single course of glass, but yet, I think, more on the whole than is permitted by the present system. I tried the experiment myself last winter on a very small scale, by a double glass in some side lights, expecting to find inconvenience from condensed moisture, &c., but finding none I think the idea worth more extensive trial. Gardeners will thank the man who will introduce a substitute for shutters having equal effect. For general directions for Hothouse management the details given last month will still be applicable; as also those referring to the Vegetable Garden.

T. J.

[CONTINUED FROM LAST NUMBER.]

From J. B. Baxter—A Pear labelled *Sieulle*, not true to name; very large, four and one-quarter inches long, three and one-half broad, and weighing fourteen ounces; long, obovate, inclining to pyriform; greenish yellow; stem one and a quarter inches long by three-sixteenths thick, and half an inch thick near its junction with the fruit, where it is very fleshy, inserted obliquely on a nearly flat surface considerably inclined; calyx small, set in a deep, rather narrow, furrowed basin; seed *pale* cinnamon, (the lightness of the color being probably owing to partial decay) two-fifths of an inch long, one-fifth wide, and one-eighth thick, long, acuminate, with an angle on one side of the blunt end; flesh slightly granular, buttery, melting; flavor rich and delicious; quality "very good." This is probably the *Beurre Soule* shown by Mr. Robert Buist at our Annual Exhibition in 1848, and which could not be recognized by our own Pomologists or by those of Boston as any known variety. The tree that produced these specimens, and several more with the same label were purchased by Mr. Buist from Thomas Landreth, who had imported them with a large collection of other kinds from France, through the late John B. Smith. But on examining the invoice, no such name as *Beurre Soule* was to be found in it.

The variety, however, being considered valuable, scions of it were widely disseminated; and some were sent to Mr. Baxter. When the remaining trees, under this name, in Mr. Buist's possession, fruited, they proved to be the *Duchesse D'Angouleme*. Even the identity of the first tree with the *Duchess* may possibly be established by further investigation, although the specimens of the *Beurre Soule* exhibited in 1848 appeared to all of us a separate and distinct variety.

From Western New York, through J. B. Baxter—*The Canandaigua*; two and a half inches long by two and a half broad; roundish—turbinate inclining to pyriform, largest in the middle; skin smooth, thin, greenish yellow; stem broken off, inserted without depression; set in an irregular furrowed basin; flesh fine texture, buttery, melting and exceedingly juicy; flavor pleasant with a delicate aroma; quality "very good."—These specimens differed materially in size and form from those that were exhibited at the Second Session of the Congress of Fruit Growers, at Castle Garden, New York, in 1849.

From Robert Buist—*Bon Cretien de Verneis*; rather large, two and seven-eighths inches long by two and five-eighths broad; obovate; greenish yellow, with small greenish russet patches, and many cinnamon russet dots near the crown; stem three-fourths of an inch long, and one-sixth thick, fleshy at its junction with the branch inserted in a small depression; calyx closed, set in a regular, rather deep basin; flesh somewhat granular, juice abundant; flesh pleasant, sprightly, with some astringency; Leroy places it among the kitchen pears, but we consider it for the table at least "good."

From Chas. Kessler, of Reading.—*The Ritter*, a native apple of Exeter Township, Berks County; two and a half inches long by two and seven eighths broad; roundish oblong; red in stripes of various hues, with many large white dots; stem short, and moderately stout, inserted in a deep narrow cavity; calyx medium, closed, set in a deep, rather wide basin; seed

very short, plump, light cinnamon; flesh tender; flavor fine; quality "very good."

From William Knabb, Oley Township, Berks County, through Charles Kessler.—Fine specimens of the *Yost* and *Yacht or Jagd* apples, described in our ad interim Report for December, 1852; both "very good" in quality, and worthy of being widely disseminated.

From C. B. Lines, of New Haven.—*White's Seedling*, a native pear of Connecticut. Size medium, round-obovate; greenish yellow, sometimes russeted; stem rather long and slender, inserted somewhat obliquely into a small fleshy excrescence; calyx open, segments short, set in a rather shallow basin; flesh of fine texture, buttery, juicy; pleasant flavor; quality "very good."

From Hon. B. V. French, of Braintree.—*The Beurre Clairgeau*. Size very large; four inches long and three broad; pyriform, larger on one side; nearly covered with russet patches and dots, even on its brown cheek; stem an inch long, rather stout, fleshy at both terminations, inserted obliquely with little or no depression; calyx open, segments short, basin narrow, very superficial, slightly furrowed. Not sufficiently mature for testing.

From Mr. Eckert, of Reading.—A large pear, three and three-eighths inches long by three and three-eighths broad; roundish turbinate, bright yellow, with numerous small russet dots and a marbled carmine cheek; stem seven-eighths of an inch long and one-sixth thick, inserted in a slight depression; calyx medium, segments reflexed, set in a moderately deep basin; seed large, dark brown, pyriform, plump, terminating suddenly in a long neck; flesh somewhat coarse, buttery, melting; flavor fine, with a delightful aroma; quality "best;" eaten October 16th. Tree young, vigorous, very productive; leaf large, broad, dark green; branches tortuous; shoots stout, dark brown. This we take to be *Beurre Diel*; and, if we are correct in our conjecture, it is, though not the largest, by far the fairest, most beautiful and delicious specimen of that variety we have ever seen; indeed we have rarely met with the *Beurre Deil* more than simply "good" in quality.

From Joshua Pierce, of Washington, D. C.—Three varieties of pears, and one of persimmons.

St. Michel Archange, true to name, of fine size, and, at least, "very good" in quality.

Verte Longue Panache or Culotte Suisse, prized only for its curious longitudinal green and yellow stripes.

A Kitchen Pear, without a name; very large, three and three-quarter inches long by three and one quarter broad; said to be fine for culinary purposes, and remarkable for its productiveness.

Persimmons, (Diospyros virginiana.) of extraordinary size, measuring an inch and a half long, one and three-quarters broad, and five and a quarter inches in circumference, and weighing an ounce and a half; form roundish-oblate. Being pulled prematurely, they were not in eating condition, and had probably not acquired their appropriate color. We should be happy again to receive specimens of this variety, to test its quality, when it has been subjected to the ameliorating influences of frost. Six or seven years ago, the *Bon Jardinier* informed us that two Horticulturists in France had been experimenting with the American Persimmon, with a view

to its improvement, and had arrived at encouraging results. One of them succeeded in raising a Seedling which "*large round fruit double the size of the original species, the flavor of which recalls that of a Mirabelle plum.*" The other originated a variety, which, in honor of a friend, he named "*Plaqueminier Pierquin,*" producing "*fruit as large as a hen's egg, oval acuminate, of a golden yellow color, and an agreeable flavor.*" Neither of these new kinds, so far as our information extends, has yet been imported into this country.

The report of the Committee for awarding premiums for the objects at the 25th, Autumnal Exhibition, were submitted and assented to.

PENNSYLVANIA HORTICULTURAL SOCIETY.

October 15, 1853.

The Stated Meeting was held, as usual, this evening.

General Patterson, President, in the chair.

The following premiums were awarded.

Chrysanthemums—For the best six large, named varieties, to Thomas Fairley, foreman to Robert Buist; for the second best, to James Bisset; gardener to James Dundas; for the best six pompones, to Thomas Fairley; for the second best, to H. A. Dreer; for the best specimen of a large variety, to Thomas Meehan, gardener to Caleb Cope; for the best specimen pom-pone variety, to Thomas Fairley. Special premiums of two dollars each, to J. F. Knorr's gardener, Adam Uber, James Bisset and Alexander Parker, for displays of Chrysanthemums.

Plants shown for the first time—a premium of three dollars to James Bisset, for *Medinilla speciosa*, and two dollars to Thomas Meehan, for *Calanthe veratrifolia*.

Bouquet Design—For the best, to Thomas Meehan. Basket of cut flowers—For the best, to James Bisset; for the second best, to Thomas Meehan.

Pears—For the best ten specimens, the Duchesse d'Angouleme, to Isaac B. Baxter; for the second best, the Passe Colmar, to the same.

The Committee cannot suffer the present occasion to pass without expressing their highest appreciation of both of the above varieties, and regret that the cultivation of fruits so super-excellent is not more general.

Special premium of three dollars to Wm. Johns, for a fine display of Grapes, some six or seven varieties, all of which were in prime order.

Celery—for the best six stalks, to James Jones, from Girard College garden; for the second best, to the same. **Broccoli**—For the best five heads, to Thomas Meehan. **Brussels Sprouts**—For the best six stalks, to Daniel McDermot, gardener to Mr. Sayers. For the best display by an amateur, to Thomas Meehan.

AD INTERIM FRUIT REPORT, FOR NOVEMBER.

PHILADELPHIA, Nov. 14, 1853.

To the President Penna. Hort. Society:—

Since the October meeting of the Society, the following fruits have been forwarded to the Fruit Committee for examination:

From P. H. Cassady, 20 Logan Square, through Robert Kilvington, two varieties of Grapes.

1. *The Cassady*.—An accidental seedling white Grape, with native leaf, and dark purplish wood, that sprung up in Mr. Cassady's yard in 1847, and fruited in 1852 for the first time. Bunch, of medium size, tolerably compact, and sometimes shouldered. Berry, below medium, five-eighths of an inch in diameter; form round; color, greenish white with occasionally a faint salmon tint, and thickly covered with white bloom; flesh, juicy with but little pulp; flavor, pleasant; quality "very good."

2. *The Kilvington*.—This may prove a known native variety. It was purchased by Mr. Cassady, 7 years ago, before it had fruited, for the Isabella, and removed from Schuylkill Fourth and Chestnut Streets, to its present locality in Logan Square. Bunch, medium, compact. Berry, below medium, five-eighths of an inch in diameter; form, round; color, red, a shade deeper than the Catawba, with much bloom; seed, unusually large; flesh, contains some pulp, which is not tough, but half tender, and melting; flavor, vinous and saccharine without any Catawba aroma; quality "best."

From Robert Iredell, Norristown, through Mr. Jones.—A specimen of Duchesse d'Angouleme of enormous size, nearly five inches long by four and a quarter broad, and weighing twenty-five and a quarter ounces—exceeding in size any pear we have ever seen grown in this country. Notwithstanding its magnitude, we have never eaten a better flavored Duchesse—a variety by the way, which, when fully ripened, we regard in quality at least "very good."

From Mr. Eckert, Reading—Additional specimens of the pear mentioned in the last "Ad Interim Report" as being probably the *Beurre Diel*. These were even larger than those previously received, and possessed a still more brilliant cheek, and equally fine flavor.

From St. Louis County, Missouri, through J. T. Thomas, Esq.—Two Apples for their names. One we recognised as the *Vandiver*; the other is probably an apple of Western origin, with which we are unacquainted.

From Thomas Thornily, Fallston, Beaver county, Pennsylvania—A large collection of Apples, exhibited at the State Fair at Pittsburgh, and sent to us by Mr. Thornily, at the request of some of our friends who saw them on that occasion. But before they came into our possession, which was not until the 14th of October, they had been exhibited at the Burlington County Agricultural Fair at Mount Holly, and at the Fair of the Philadelphia Society for promoting Agriculture. Some of us noticed them at both of these Exhibitions, and were not a little surprised at the size and beauty of the specimens, and the great number of varieties embraced in the collection. Unfortunately when we received them, the handsomest specimens had all disappeared; and the extensive collection had dwindled down to fourteen sound apples, and nine in a state of decay. We were therefore much disappointed in being prevented from giving to so choice a collection the minute examina-

tion it so richly merited. Concerning it, however, we may remark generally, that it indicated either a peculiar pomological adaptation in the soil and climate of Beaver county, or extraordinary skill in fruit culture, on the part of Mr. Thornily—probably both.

From P. R. Freas, Esq., of the Germantown Telegraph—Large and beautiful specimens of two varieties of Pears.

1. *Vicar of Winkfield, or le Cure*. The size, productiveness, and uniform bearing tendency of this variety fully entitle it to be ranked in quality "very good."

2. *Doyenne d'Hiver*.—This name is given as a synonyme of the Easter Beurre by the London Horticultural Society, and of the Easter Bergamot by Andre Leroy, of Angers. The Easter Beurre is a Winter Pear, of the "best" quality, when properly ripened. It must be confessed, however, that our knowledge of the pear ripening process, of the Winter varieties, is exceedingly defective; and on this account, it often happens that they fall far short of their intrinsic excellence, at their appropriate season of maturity.

From Col. Charles R. Belt, of the District of Columbia—*Specimens of Belt's Hybrid Walnut*. The history and appearance of this unique and interesting hybrid present unequivocal evidence that it is a natural cross between the Butternut (*Juglans cinerea*.) and the English Walnut (*Juglans regia*.) the latter being the maternal parent. It originated about twenty years ago at Chavy Chase, the residence of Col. Belt, near Washington, District of Columbia, from an English Walnut planted by his brother, Capt. Wm. I. Belt, late of the United States Navy. Capt. Belt procured the nut from an English Walnut tree in the garden of Mrs. Bowie, of Prince George's County, Maryland. Within a few hundred yards of Mrs. Bowie's residence, grew a number of Butternut trees, some of the pollen from the blossoms of which had no doubt been wafted by the wind, or conveyed by insects to the English Walnut tree in the garden and occasioned hybridism. After the nut had sprouted, Col. Belt took it up and replanted it in the locality it at present occupies. The tree is a vigorous grower, and is represented as being exceedingly ornamental. 1852 it fruited for the first time; and in September of the same year, specimens of the nuts, with the wood and foliage, were exhibited by Mr. Joshua Pierce, of Washington, at the meeting of the American Pomological Society, in Philadelphia. The nut, in its general appearance, differs very materially from any others of the *Juglans* family:—size, large, one and three-fourths inches long, one and seven-twelfths wide, and one thick, exclusive of the remarkable carina, elevated a fourth of an inch above the surface and extending entirely around its longitudinal circumference; form, ovate, pointed at its apex; exterior surface, deeply and boldly, but interruptedly and irregularly sulcated, without having the continuous longitudinal furrows usually noticed in the Butternut; color, light brownish yellow; kernel fine. Mr. Pierce has succeeded in two instances in grafting this variety on the English Walnut. What has been the success of others, in propagating it, to whom scions were sent, we are not informed. It is extremely difficult to graft the Walnut in any of the ordinary ways. Owing to the excitability of its buds, they are apt

to push, and exhaust the organizable matter of the scion, before its union with the stock can take place. This usual cause of failure is obviated by working, as recommended by the late President Knight, with the base of the annual shoots, the buds of which are small and but little developed. Another successful mode, noticed in D'Albret's recent work on grafting, is to cleft-graft in the side of the young shoots, and is said to answer well whether performed in the solid or herbaceous state. In regard to the stock for Belt's Hybrid, we would suggest the Butternut for standards, and the *Juglans præparturiens* for dwarfs.

From J. B. Garber, of Columbia, Pennsylvania—Nine varieties of Apples, sent to him from Georgia. These are the first apples we have received that were grown in that state. Much attention, we understand, is being paid at this time, by the Pomologists of Georgia, to the raising of late kinds of this fruit. Those that ripen with us in winter, become, when transferred so far South, autumn varieties. This fact has induced them to turn their attention to the Southern Seedlings. And we learn, that they have already succeeded in originating a number of kinds, which promise to be far better keepers, than those which they had previously obtained from the North. We are so much pleased with the appearance of those sent to us by Mr. Garber, that we hope Mr. Richard Peters, of Atlanta, or some of our other Georgia friends will furnish us, at the proper season, with other specimens for examination. Although these we have received are not in a condition for testing, we deem them sufficiently interesting* to merit a full exterior pomological description, especially as most of them are entirely new to us. And if it should prove from our descriptions that we have not received the true varieties, we trust specimens that are genuine will be forwarded to our Society.

1. *Limber Twig, or James River.*—This variety has been cultivated to a considerable extent in Virginia, and some of the Western States. Size—full medium, three inches long by three and three-sixteenths broad; form, roundish oblong; color, striped and marbled with pale red on a yellowish ground, yellow around the crown, a good deal russeted about the base; stem three-fourths of an inch long by one-twelfth thick, inserted in a deep acuminate, russeted cavity; calyx small, closed, set in a wide, shallow basin.

2. *Summerour.*—Size large, three and one-eighth inches long, three and five-sixteenths broad; form roundish oblate; color a mottled greyish red, with dark crimson stripes, and containing large grey dots; stem five-eighths of an inch long and one-fifth thick, inserted in a deep, narrow, partially russeted cavity; calyx small, closed, set in a deep, wide, plaited basin.

3. *Berry.*—Size, rather large, two and five-eighths inches by three and five-sixteenths; form, roundish-oblate; color, striped and mottled with crimson on a greenish-yellow ground, with a number of green russet spots; stem, one-half an inch long, one-tenth thick, inserted in a tolerably deep cavity; calyx, rather large, set in a wide, shallow basin.

4. *Mountain Sprout.*—Size, medium, two and three-fourths inches by two and seven-eighths; form, oblong-truncate; color, red, with stripes of deeper hue, white dots numerous; stem, three eighths of an inch long one-eighth thick, inserted in a narrow cavity; calyx medium, partially open, set in a wide, deep, slightly furrowed basin.

5. *Camac's Sweet*.—Size, below medium, two and one-half inches long, by two and three-fourths broad; form, roundish conical; color, whitish green, clouded with green-russet on the more exposed parts, and a faint brown blush; stem, (perhaps broken), one-fourth of an inch long, and one-eleventh thick, inserted in a narrow cavity; *calyx*, large, closed, set in a wide, shallow basin.

6. *Nickejuck*.—Size, large, two and three-fourths inches long, by three and seven-eighths broad; form, oblate; color, striped and mottled with red on a greenish ground, grey dots abundant; stem, five-eighths of an inch long and one-eighth thick, inserted in a wide, not very deep, russeted cavity; *calyx*, large, partially open, set in a wide, superficial basin; core, under medium; seed, small, light brown, ovate; flesh, tender, juicy; flavor, fine, with an exceedingly delicious though delicate aroma; quality "best." This variety we regard with especial favor; and we feel assured it will become popular wherever known. It is said to be a native of North Carolina, and to have been found growing among the Cherokee Indians.

7. *Callasaga*. Size, above medium, two and three-fourths inches long, by three and one-fourth broad; form, roundish, slightly tapering to the crown; color, dull brown, faintly striped, on a greenish yellow russet ground; stem, three-eighths of an inch long, and one eighth thick, inserted in an irregular, rather deep cavity; *calyx*, large, open, set in a deep, wide, obscurely furrowed basin.

8. *Cranberry*. Size, medium, two and five-eighths inches long, by three broad; form, roundish conical; color, brightly striped with carmine on the unexposed side, and of a deeper red on the part subjected to the full solar influence, many grey russet dots, large and sometimes stellate towards the base, smaller and more numerous near the crown; stem, three-eighths of an inch long, and one-ninth thick, inserted in a narrow, acuminate, russeted cavity, *calyx*, small, closed, set in a wide, shallow basin, with four or five small fleshy elevations, at the bottom near the calyx.

9. *Dapper*. Size, rather small, two and one-eighth inches long by two and three-fourths broad; form, roundish truncate; color, whitish yellow, with several crimson specks, and faintly clouded and marbled with yellowish green, with an obscure pale orange cheek; stem, three-eighths of an inch long, and one-twelfth thick, inserted in a medium, acuminate cavity; *calyx*, small, closed, set in a moderately wide, very deep basin.

From Chas. Kessler, Esq., Reading.—A collection of fruit, embracing specimens of a Pear from Lower Heidelberg, Berks County Pa., and nineteen varieties of Apples, eleven of which were grown in Berks County, and eight near Dixon, Illinois:

1. *The Heidelberg Pear*—which was supposed to be a foreign variety, we did not recognize till it was cut, when it at once became known to us as *the Feaster*. Under the name of *Bleecker's Meadow* it is noticed in most of the horticultural works, but its merits have not been properly appreciated. And although admitted to be a native of Pennsylvania, there is no published record of its history, nor any information given in any work in regard to the particular locality of its origin. The Philadelphia Market has long been abundantly supplied with it, under the names of *Spice* and

Spice Butter. Not, however, until recently, have we been able to trace its history; for which we are chiefly indebted to Mr. Mahlon Moon, of Morrisville, Bucks County. This variety originated, about seventy years ago, with Aaron Feaster, of Northampton Township, Bucks County. Having sprung up on a piece of ground used as a meadow, Mr. Feaster called it the *meadow Pear*; subsequently it was named *the Feaster*. The original tree is still standing, and continues, at the age of three-score years and ten, to bear most abundantly. Some seasons, it has yielded five barrels of fruit, which was sold for forty dollars. Although rather coarse in texture, and somewhat gritty at the core, yet when properly house ripened, it is rich, melting, delicious, and in quality, "very good." Judging from the form and flavor, its parents are probably the Seckel and the Bergamot. October is its period of maturity.

2. *The Hepler*—grown by Mr. Hepler, of Reading. A native winter Apple described in the ad interim Report for April last. The present specimens differ from those sent us last spring, in being larger, two and three-fourths inches, by three and one-fourth; in possessing a short stem, three eighths long, by one eighth thick, and in having a marbled red cheek with usually one or more white marks, as if the red coloring matter had been entirely rubbed off. Specimens not sufficiently mature for testing.

3. *The Fornwalder, Fallenwalder, or Fallwater.*—We have been informed by some of the old inhabitants of Reading, that this variety originated with a Mr. Fornwald, of that place; hence the name Fornwalder. In our notice of it in the March ad interim Report, we considered it of "good" quality. The specimens received by us this season, being remarkably fine, measuring more than a foot in circumference, have given us a still more favorable opinion of it. Indeed the uniformly large size, unblemished appearance and fair quality of the Fornwalder render it worthy of being more widely cultivated.

4. *The Rambo.* Philadelphia was plentifully supplied, some years ago, with this apple, from the neighboring state of New Jersey. Now it has almost entirely disappeared from our market. The specimens, however, sent by Mr. Kessler, clearly indicate that it still flourishes in the vicinity of Reading.

5. *The Keim*—grown on the premises of Mrs. Kessler. This native apple, of Berks County, we noticed in our February and March "ad interim" Reports. The present specimens are larger and fairer than those previously received, but have not yet reached their period.

6. *The Krouser*—a native apple, noticed in our December and February Reports.

7. *Unknown*—grown near Dixon, Illinois. Size, very large, three and one-quarter inches long by four broad; form, roundish, obscurely conical, somewhat compressed at the sides; color yellowish green, with a faint blush; stem, short, stout, half an inch long, by one-sixth thick, inserted in a wide, obtuse cavity; calyx, open, set in a deep, rather narrow basin, slightly plaited. Not mature.

8. *Unknown*—grown near Dixon, Illinois. Size, very large, three inches long, by three and seven-eighths broad; form, oblate; color, brownish

red, mottled with greyish russet, and interspersed with numerous large grey dots with a russet point in the centre of each, yellowish green about the crown; stem, short, stout, fleshy, five-eighths of an inch long, and three quarters thick, inserted in a wide, shallow, russetted cavity, with a prominence on one side; *calyx*, large, closed, set in a wide, rather shallow basin. not mature.

9. *Unknown*—grown near Dixon, Illinois. Size, large, two and seven sixteenths inches long, by three and three-sixteenths broad; form, roundish oblate, somewhat angular; color, beautifully striped with carmine on a yellowish white ground; stem, short, three-eighths of an inch long and one-tenth thick, set in a deep, moderately open cavity; *calyx*, closed, set in a narrow, superficial basin. Not mature.

10. *Unknown*—grown near Dixon, Illinois. Size, large, three inches long, by three and one-half broad; form, oblong truncate; color, brown, on greenish yellow ground, with a number of grey dots; stem, half-inch long and one-eighth thick, inserted in a rather deep cavity; *calyx*, medium, set in a deep, wide, furrowed basin. Not mature.

11. *Unknown*—grown near Dixon, Illinois. Size, large, two and seven eighths inches long, by three and three-eighths broad; form, roundish conical; color, striped and mottled with red, on a greenish yellow ground, stem, short and slender, one-half inch long and one-eleventh thick, inserted in a deep, narrow cavity; *calyx*, small, partially reflexed, set in a narrow, moderately deep, plaited basin. If the quality of this and the four preceding apples corresponds with the size and fine appearance of their exterior, they should be widely disseminated. Perhaps our corresponding member, Dr. Kennicott, or some of the Pomologists of Chicago, whence the trees were obtained, can inform us what the varieties are.

12. *Labeled Limber Twig*—a small, pleasant, greenish yellow apple from Illinois, not true to name.

13, and 14, also from Illinois, are small and not prepossessing in appearance.

15. *Vandiver*—grown by Mrs. Kessler, of Reading. Specimens very fine. This variety is chiefly prized for its culinary properties. In regard to the orthography of its name, we would remark, that in Delaware, where it originated, there is no family with the cognomen Vandervere, but there are many of the inhabitants of Swedish descent, in that State, who write their name Vandiver.

16, 17, 18, 19 and 20—were grown by David L. Wenrich, of Reading. Most of these are sweet apples, of pleasant flavor. But their small size, unaccompanied by an attractive exterior, impairs their value.

Objects Shown.

Plants.—By Thomas Fairley, foreman to R. Buist:—Six Pompones *Chrysanthemums*—Cybele, perfection, La Nain Bebe, Madam Chauvierii, Lartay, Velede, and six large kinds—Emilie Theresa, Queen, Julia Langdale, Henri Hulme, Mrs. Cope, and Salter's Annie; specimen pompones—Cybele; specimen plant—Hoya Cunninghamii; and 36 varieties *Chrysanthemums*.

By H. A. Dreer : —Pompone Chrysanthemums—La Fiance, Ninon de l'Enclos, Roi de Liliput, Bazaar, Mignonette, La Gitana, and Triomphe de Bordeaux.

By Thomas Meehan, gardener to C. Cope :—For the first time—*Calanthe veratrifolia* : Chrysanthemums, pompone specimens—La Nain Bebe, Cloth of Gold, perfection, Elegant, Mignonette, Sacramento ; large kind, specimen—Grandis.

By William Haas, gardener to J. F. Knorr :—Chrysanthemums, shown for the first time—Aramis, Ariadne, Atropos, Avocat tardif, Beauty Touloumain, Belot Defougere, Berryer, Caroline Gignoux, Chedeville, Comte de Chambord, Croustignac, Dame Blanche, Fontenay, Etoile de Matin, General Carrelet, Grand Sultan, Grazielle, Hendersonii, Jason, Jonquille, Junon, Justine, Tessier, Laïs, La Rousse, La Vestale, Mad. Chauvierii, Mad. Henie, Mad. Jules d'Evry, Mad. Rousselon, Mad. Schmidt, M. J. Phiscopal, Perle d'Automne, Rosini, Trianon, Sou. de Roquancourt—Astrolobe, Christophe Colomb, La Phar, Lingot d'Or, Mad. de Thury, Montaigne, l'oudre d'Or, Rantounett, Sapho, Triomphe du Nord—Cedo Nulli, Constance, Corcardeau, Columbine, Etincelle, Jacques, Mad. Hec Jacquin—52 varieties, and about 20 older varieties.

By James Bisset, gardener to James Dundas :—A new plant—*Medinilla speciosa*, and six large choice kinds, and a table of fine varieties.

By Alexander Parker :—A large display.

Bouquets and Designs.—By Thomas Meehan :—A Design and Basket.

By James Bisset :—A handsome Basket.

Fruits.—By Isaac B. Baxter :—Pears—Duchesse d'Angouleme, Passe Colmar, D'Aremberg, St. Germain, and Napoleon.

By Robert Buist :—Pears—Duc de Bordeaux, and Monsieur le cure.

By William Johns :—Grapes—six kinds.

By C. V. Hagner :—Catawba Grapes.

By N. A. Roe :—Bon Chretien Pears.

Vegetables.—By Thomas Meehan, gardener to C. Cope :—Broccoli, Celery Brussels Sprouts, &c., &c.,

By James Jones, gardener at the Girard College :—Red and White Celery.

By Daniel McDermot, gardener to Mr. Sayers :—Brussels Sprouts.

SOME OF THE HANDSOME PLANTS OF CHINA.—“Ah, you have come back!” “Are you?” “How did the plants get home?” “Were they much admired in England?” were the questions which were rapidly put to me by the old nurseryman and his sons ; at the same time they brought a chair, and asked me to sit down under the awning of the cottage. I told them that most of them had arrived safely in England, and that they had been greatly admired. This garden contains many of the beautiful plants introduced by the Horticultural Society of London, from 1843 to 1846.

Amongst some pots at the entrance there were fine plants, of the now well known *Weigela*, the pretty *Indigofera decora*, *Forsythia viridissima* and a fine white variety of *Wistaria Sinensis*. Round the sides of the ditch were many magnificent specimens of *Edgeworthia chrysantha*, and *Gardenia florida Fortuniana*, growing in the open ground. Some of the *Gardenias* were 4 feet high and 15 feet in circumference. When covered with its large camellia-looking blossoms, it is extremely handsome, and at all times forms a pretty evergreen bush. In a bed in the middle of the garden the white variety of *Platycodon grandiflorus* was in full bloom, and near it a bed of *Dielytra spectabilis*. Both these looked very handsome, particularly the latter; its large purse like blooms, of a clear red colour tipped with white, and hanging down gracefully from a curved spike, and its mountain-like leaves, render it a most interesting plant, and one which will become a favorite in English gardens. Several kinds of roses were growing in pots, and amongst them the new yellow, or salmon coloured, introduced by the Horticultural Society. This rose deserves more notice at home than it has yet had; doubtless it will be more thought of when it is better known and properly treated. It should be planted out at the foot of wall with a southern or western aspect, and allowed to scramble over it. It grows rapidly; the flowers are of a strong colour, and are produced in great profusion. Fine plants of *Viburnum plicatum* and *V. macrocephalum*, were also noticed, both in pots and also in the open ground. I also observed some young plants of the interesting palm tree (*Chamerops excelsa* ?), which I have already noticed in the earlier pages of this work. It is perfectly hardy about Shanghai, and thrives there, unprotected, throughout the severest winter. There other palms, yet this was the only one that seemed hardy. Here were also some beautiful peach trees, with double flowers. Two of these have already been described by Dr. Lindley, and named the double white, and double crimson peaches. But, fine as they undoubtedly are, there is a third, far more beautiful and striking than either of them. This produces large double white flowers, which are striped with red or crimson lines like a carnation. A tree of this variety, in full bloom, is one of the most beautiful objects that can be imagined. These double peaches seem to be particularly well adapted for forcing, as they form their flower buds fully in autumn, and are ready to burst into bloom with the first warm days in spring. A little artificial heat, therefore, will bring them into full flower about the new year, or any time from that period up to March. As spring flowers, they are highly prized by the Chinese. Itinerant gardeners carry them about the streets for sale in the northern Chinese towns. The flower buds were then just beginning to expand; the buyer puts them into pots,

gives them a little water, and places them in his window or sitting room. In a day or two the buds burst, and the little tree is one mass of bloom. In this state all the three varieties are very beautiful; but I think the carnation striped one is the handsomest of them all. In the centre of the South Garden there is the family tomb—a large mound of earth, covered with many pretty flowers. Here the old man's forefathers, for many generations, lie buried, and here he will sleep among the flowers beloved in his lifetime. This garden contains a good assortment of shrubs and trees which have been longer known than those I have enumerated. There are some beds of Reeve's *Spiræa* (*S. Reevesiana*), a beautiful shrub; the Chinese Juniper, *Hibiscus syriacus*, *Wistaria sinensis*, *Lagerstræmias*, plums, and the favorite La-mae (*Chimonanthus*), with which Chinese ladies decorate their hair. I had now made the circuit of the garden, and came to the little wooden bridge, by which I entered, to the gardener's house.

When I reached Chusan, in latitude 30° north, I found a remarkable change in the appearance of the vegetation. Tropical forms had entirely disappeared, or were rarely met with. Although the summers were as warm or even warmer than they were in the South, yet the winters were nearly as cold as those we have in England. At this place, and all over the provinces of Che-kiang and Kiang-nan, the *Glycine* seemed to be at home. It grew wild on every hill-side, scrambling about in the hedges by the foot-paths, and hanging over and dipping its leaves and flowers into the canals and mountain streams. But by far the most beautiful effect is produced when it attaches itself to the stems and branches of other trees. This is not unfrequent in nature, and is often copied by the Chinese, and introduced into their gardens. One can scarcely imagine anything more gorgeous or beautiful than a large plant of this kind, in full bloom. Its main and larger branches are entwined round every branch of the tree, and from them hundreds of small ones hang down until they nearly touch the ground. The whole of the branches are covered with flower buds, which a day or two of warm weather brings rapidly forward into bloom. To form an idea of the effect produced by these thousands of long lilac racemes, one must imagine a floral cascade, or a weeping-willow covered with the flowers of the *Glycine*. There are some large specimens of this kind on the Island of Chusan; one in particular was most striking. Not content with monopolizing one tree, it had scrambled over a whole clump, and formed a pretty harbour underneath. When I saw it last it was in full flower, and had a most charming appearance. The Chinese are fond of growing the *Glycine* on trellis-work, and forming long covered walks in the garden, or arbours and porticos in front of their doors. There is a remarkable specimen in the garden of a mandarin, at Ning-po. Growing in company with it is the fine new variety introduced lately by the Horticultural Society of London, and described in the Journal of the Society. In foliage and general habit the two kinds are nearly alike, but the new one bears long racemes of pure white flowers. The kind old gentleman to whom the garden belonged allowed me to make layers of this plant on the top of his house, and during the summer months, when I was travelling in other districts, attended to them and watered them with his own hands.—*Fortune's Journal to the Tea Countries of China.*

 THE NILES PEAR.

We are indebted to Wm. V. Pettit, Esq., of West Chestnut Street, in this city, for a specimen of the Pear which we figure in this number. It is a foreign Pear imported by the Hon. Mr. Niles of Connecticut—the name is lost, and it is now called the Niles—it is thought by some to be the Easter Beurre. A full description will be given in the next ad interim report of Penn. Hort. Society.

Even Strawberries of the most distinct sorts, planted out and treated in the usual way for a few years, so degenerate and change that they cannot be identified by the best judges. *N. M. T.* in Gardener's Chronicle p. 565.

EUPHORBIA JACQUINIFLORA.—If we take a retrospect of the plants that have been introduced into the stoves of Great Britain within some few years, not one has preference to the *Euphorbia Jacquiniflora* (or *fulgens*): the length of time the flowers continue expanded, the elegant growth of the plant, if properly managed, and its very long spikes of rich orange-scarlet flowers, give it a decided pre-eminence among stove plants. This lovely plant is a native of Mexico, and was introduced into Germany a few years ago, through Baron Kerwinski, and from thence to Britain by Mr. Runch.

Cultivation.—Mix equal quantities of loam, peat, and rotten cow-dung with a little sand. If cow-dung cannot be got, any very rotten manure will do. **Cuttings** will strike very freely in sand. After they are struck, pot them off into sixty pots, and shift them regularly as the pots become full of roots. It is very necessary to stop the terminal shoots frequently, otherwise the plant will grow very tall and slender, and, as gardeners term it, be long-legged. When the pot is full of roots the plant will flower, even if it be small; but it must be observed, that if cultivators desire to have large plants, they must shift them frequently until they wish them to display their beautiful flowers. It is a charming plant for winter and early spring bloom; in fact, by proper treatment, a succession can be had all the year, and nothing more lovely than spikes a foot or more long of its showy brilliant blossom, each flower nearly the size of a sixpence. It does well in a hot-bed frame of moderate temperature, as well as in the stove. It may be kept during winter in the greenhouse, but must, during the season of rest, be kept nearly dry, and give water when you want again to promote its growth.—*Flor. Cabinet.*

LEAVES FROM MY CHINESE NOTE BOOK.—The wealthy amongst the Chinese generally select very beautiful spots on the hill sides for their tombs. Near Tse-kee, a walled town of considerable size, some fifteen miles to the northward of Ningpo, there are some pretty spots of this description. These tombs, apparently, are very ancient, for the trees which had been planted when they were first formed are now fully grown, and the tombs themselves in many instances, are overgrown with weeds and going fast to decay. Happening one day in June last to be wandering on one of these hill sides, a tree in the distance caught my eye, which appeared very curious and striking. It was one of those Junipers (*J. sphærica*) which grow to a considerable size in the north of China, and which the Chinese are fond of planting round their graves. But although a Juniper at the top and bottom, an evergreen tree with large glossy leaves (*Photinia serrulata*), formed the centre. On reaching the spot where it grew, the appearance presented was, if possible, more curious and interesting. The *Photinia* came out from the trunk of the Juniper about fifteen feet from the ground, and appeared as if it had been grafted upon it; indeed, some Chinese in a neighboring village, to whom the tree was well known, did not hesitate to express their belief that such had been the case, but I need scarcely say this was out of the question. Upon a close examination of the point of apparent union, I found that although the part between stock and graft, if I may use the expression, was completely filled up, yet there was no union such as we see in grafted trees. There could then be only one way of accounting for the appearance which these two trees presented, and which is pretty well shown in a drawing which I send, taken by a Chinese artist. The *Photinia* was no doubt rooted in the ground, and had twelve feet of its stem cased in the trunk of the Juniper. The apparent union of the trees was so complete, that nothing could be seen of this arrangement; but upon tapping the lower part of the trunk it sounded hollow, and was no doubt decayed in the centre, although healthy enough outside.

Upon showing the sketch alluded to above to a learned Chinese at Ningpo, he, like the villagers, fully believed the *Photinia* had been grafted upon the Juniper; and further, he informed me it was a common thing in the country to graft the Yang-mae (*Myrica* sp., a fine Chinese fruit tree) upon *Pinus sinensis*, and that by so doing the fruit of the Yang-mae became much larger and finer in flavour. Having been engaged in procuring some Yang-mae trees, which the Government of India is anxious to introduce to the Himalaya, I was somewhat better informed upon the subject than the learned Chinaman. I told him the fine variety of Yang-mae was grafted upon the wild kind, which the Chinese call the *San* or hill variety (*Myrica sapida*); and further, I showed him some plants which I had just purchased, but all

was of no use, he was "convinced against his will," and still firmly believes the Yang-mae is usually grafted on the Pine. R. F.—*Gard. Chron.*

AGERATUMS AND HELIOTROPES FOR WINTER BLOOMING.—The suitability of these plants for greenhouse decoration during the flowerless and dreary months of winter, does not appear to be so generally known as it should be. To grow them for this purpose, the cuttings should be rooted the same time as Chrysanthemums, viz, the middle of July, and potted into three inch pots; and, about three weeks later, shifted into the pots in which they are intended to bloom. Loam of ordinary quality, with a little rotten dung and coarse sand, will be found quite good enough to grow them in. About a fortnight after their final shift, plunge the pots in a warm border, where they can remain till the middle of October. By this time they will have become fine bushy plants, well furnished with flowering shoots, and should be taken up, the pots washed, and the plants tied into shape, and removed to the conservatory or greenhouse, where they will continue in flower the whole of the winter. As the pots will be full of roots when in their winter quarters, they must have a plentiful supply of water; for if neglected in this respect they lose their leaves, and though they still retain their flowers, yet when denuded of their foliage they become unsightly.—*Gard. Chron.*

WESTERN AGRICULTURAL EXCHANGES.

Every one regretted the suspension of the most interesting of monthlies the *Western Horticultural Review*. We hope soon to see it announced that the health of Dr. Warder, its worthy editor, is sufficiently restored to resume his labors.

The Ohio Cultivator, published at Columbus, O. on the first and fifteenth of every month at \$1 per annum, is full of useful practical matter.

The Ohio Farmer—a weekly, edited by Mr. Thomas Brown, always comes to us with something interesting and instructive especially in matters relating to stock.

The Farmer's Companion, edited by a corps of enthusiastic gentlemen of Detroit, Michigan, is published at the remarkably low price of 50 cts. a year. We recommend it to all engaged in agriculture, stock raising, &c.

The Iowa Farmer. This is a new monthly, published at Burlington, Iowa, edited by Messrs. Grimes and Tallant. It bids fair to become one of the best papers in that section.

The Western Plowboy is the title of a paper published at Fort Wayne, Ind., \$1 a year.

The Prairie Farmer, published at Chicago, Illinois, at \$1 per annum, is one of the very best of our exchanges. As a useful farmer's paper we put it in the very first rank. The horticultural department is under the charge of Dr. J. A. Kennicott, whose name is a sufficient guarantee for the accuracy of that part of the work.

Since writing the above notices we see that under the new name of the Horticultural Review and Botanical magazine, Dr. Warder's paper will reappear on the first of January 1854. We are glad to know that so talented a fellow labourer has sufficiently recovered his health. The Doctor will be assisted by Jas. W. Ward, Esq. The price of the Review is \$3 per annum.

The Farmer and Artizan, published at Portland, Me., is a monthly devoted to the interests of the farmer and mechanic—besides articles on agriculture, it contains notices and descriptions of inventions—price \$1 per annum.

Our friends who remit their subscriptions for the coming volume, are requested to register their letters;—the address is H. C. Hanson—Office Florist, Philadelphia.

A correspondent in Indiana, writes us, under date of December 4, that Pansies are in bloom with him in the open air. They are little affected by cold; in a garden in this neighborhood, there was not a week in which they did not bloom during last winter. What may appear surprising, a large plant of *Abutilon striatum*, which had been bedded out, survived the winter in the open ground. It was, of course, much out down,

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(Supplement to the "Florist.")

From the Farm Journal.

STRAWBERRY QUESTION.

FLUSHING, AUG. 10TH, 1853.

MR. EDITOR :—It is but little use for a man to reason in regard to natural objects, unless his mind has first become fairly matured, and has attained to the conclusion, (the most evident of all things,) that the Deity has prescribed a supreme and immutable law, beyond the confines of which there can never be any divergence. It is this eternal law which renders palpable and positive to our senses, the now unveiled facts of Geology, whose eternal impress of countless ages, bids the mind to scorn and condemn all the contradictory averments of frail man. The Deity, when placing man upon the earth, exercising both love and justice, generated within him an unerring guide, whenever he should call into exercise its unprejudiced perceptive and reflective powers.

The study and contemplation of the vegetable kingdom, with an ardent devotion for fifty years, have matured the conviction of my mind, that the Creator has been equally mindful of the humblest plant, and of the microscopic insect, as of the mightiest developments of his power; and in the pursuit of this and other studies, I have realized the fact, that all nature is replete with order, wisdom, harmony, and love.

Any question, therefore, inculcating a derangement of this supreme order and harmony, has already received its solution in my mind. In referring to the supreme law, it has been most eloquently remarked, by an American orator, that if gravitation were suspended but for a single moment, all nature would sink into chaos; and it may with equal truth be asserted, that if the eternal law of sexuality were susceptible of variation, there would be no end to the confusion of the races of animals and plants, and all creation would become a heterogeneous and disorganized mass. And although the test of "long experience" is scoffed at by Mr. Meehan, I may still deem it worth something, when all my intelligent friends have arrived at the same conclusion as myself.

In penning my previous communications, I am not aware that I have used any unbecoming language, but I must plead guilty to somewhat impatient feelings, when I see a man professing to impart information to others, commence his operations with a palpable blunder, one equally inexcusable, whether from error or from ignorance, and then attempting to palm upon the community through the medium of

[A*]

an intelligent Society, the erroneous results of his blunder as positive facts, arraigning the systematic harmony of nature; although happily the discernment of the Philadelphia Society passed over the subject without notice. Mr. M. should be aware that there are some statements and assertions, which are too weak and contemptible to admit of serious argument.

I will now proceed to discuss the points advanced by Mr. Meehan and by W. D. on the Strawberry Question, the former of which are evidently based in error, and in a confusion of *both* facts and ideas, whilst the latter has erred from misconception, and a consequent misapplication; and I respond thereto, notwithstanding I have just received a letter from the oldest and most distinguished Pomological Editor in the Union, (dated Boston,) urging me to drop the discussion as useless, since it so evidently originated through Mr. Meehan's erroneous selection of two mixed varieties in his experiments.

You will perceive that this same position was taken by me at the commencement, and also by Mr. Longworth, viz; that Mr. M. had begun with a blunder in the plants, the same as Mr. Downing had formerly done, and like the latter he had not candor enough to acknowledge his error. I trust, however, that Mr. M. will revise his operation by a new trial with genuine plants, and in such a way that there may be no room for mistake, or doubt, and all I ask of any other person is, that he will make the test for himself. Surely if Mr. M. ever did accomplish what he says he did—that is, *change pistillates to staminate*, it can be done again, for wisdom did not become extinct with his first experiment. And this last remark seems most amply verified by the disclosure of his manifest ignorance when attempting to describe what Hovey's Seedling really is, and his acknowledgement that 'one of his finest beds of Hovey's Seedling (so called by him,) was declared by others to be Buist's Prize, or some other hermaphrodite variety;—when the former is most strongly marked, and the best known of all Strawberries, and any child ought to readily distinguish the latter by its double height, long petioles and peduncles, distinct foliage, and numerous flowers, to say nothing of its differently formed fruit and sexuality. And in his communication in the Horticulturist, he further acknowledges having planted for Hovey's Seedling a bed of Burr's New Pine, two years ago, which was about the period when the blundering commenced; and yet he has the assurance to ask of us now to believe in his immutable accuracy. The strongest argument of all, is his acknowledged mistakes, showing his plants and his ideas to be equally confused.

In regard to one of McAvoy's Strawberries referred to, as having staminate and pistillate flowers on the same plant, such is the case with a staminate seedling that has come mixed in with some parcels of McAvoy's Extra Red, and also with at least a dozen other varieties; and forms one of the phases of the hermaphrodite class, among which are the Duke of Kent's Scarlet, Eberlein, Triumph and others. The flowers of the two sexes are sometimes on the same scape, and sometimes on distinct scapes.

It seems that Mr. M. and W. D. not being aware that part of the hermaphrodite family possess this character, came to the conclusion that the plant they saw was an anomaly or sportive variation; whereas, that peculiar character is as permanent and unvariable as the other classes.

I have letters just received from Mr. Longworth and Mr. McAvoy, confirming my views as to the invariable sexual character of the *true* Extra Red, and referring also to the spurious seedlings I have named. And as to the mention made by Mr. M. that Mr. Longworth stated to him in regard to the Extra Red, "that it is the first instance *that has come under his observation* of pistillate kinds producing hermaphrodite flowers." Mr. Longworth says in a letter to me, of the 8th inst., that *no such fact has come under his observation at all.* And such is the response of the gentleman whom Mr. M. quotes as having "raised that variety in his own garden, and under his own *acute observation.*"

Mr. McAvoy goes a little further, and after the most positive denial of any sexual variation, says, I will give \$50 to Mr. Meehan, or to any other person, who will change it to a staminate, and I think I know a person who will give a great deal more, *but I would select the plants myself.*"

To settle the question of apparent "evasion," I will refer at once to the point in dispute. In the first place, Mr. M. stated *he had changed pistillates to staminates or perfect flowers*, by special culture as there stated. Now if flowers do thus change and become perfect, they will of course, produce fruit, that result being the only decisive test that they are perfect; and such was doubtless his meaning and actual belief, when he made his first communication, as will be evident by referring thereto, wherein he asserts, "the distinction between staminates and pistillates to be worthless, cultivation producing either the one or the other."

But in his second communication (June,) he still adheres to the same opinion as to the transmutation of sexes, but abandons what he at first declared to be the *cause*, and says "he may be in error in his opinion that the change from one sex to another was the results of cultivation." I responded, denying his premises and his alleged facts. And he having at last discovered that pistillates grown separately will not produce fruit, backs out entirely from his other position, and when I offer as a decisive test a large premium for "one perfect berry from Hovey's Seedling grown by itself," he remarks, "*Who said they could do any thing of the kind?*" Was there ever greater subterfuge and evasion? I answer that he himself said so, and meant so, in his original communication; for if he did not mean that, what did he mean, or did he mean nothing at all?

I ask then, if this query of his does not amount to a complete recantation, and an admission of the truth of my entire position? I don't much like this slipping out by degrees and by stealth, but if Mr. M. will back square out, I shall be satisfied, for the public will then know what to believe.

Mr. M. attempts some cavil in regard to Mr. Downing's having committed a similar blunder to himself, but the facts are too transparent to be misunderstood. It is not true as Mr. M. asserts, that "Mr. D's *observations* led him to the conclusion that Hovey's strawberry would by culture, become a hermaphrodite," for he had never possessed Hovey's Seedling when he made his erroneous statement. I well remember the circumstances, for immediately after his article appeared, I jumped on board a steamer and visited his grounds; and asked to see the bed of Hovey's Seedling, when, to my amazement, I was shown a very tall growing variety, with narrow oblong pointed leaflets, of a pale green colour, long scapes, large and numerous flowers, and as totally distinct from Hovey's in these and all other points as possible.

I was astounded at such a solution of the mystery, but said nothing. I obtained a few plants from that identical bed, which I brought home, and planted, and tested to my satisfaction. Immediately on my return, I announced to Mr. Huntsman and some others, the fact and we had a most hearty laugh over this mouse from the mountain, and shortly after came forth the same miraculous disclosure by the Boston Horticultural Society. The further assertion by Mr. M., that this Society "decided that the kind was not Hovey's because it was a staminate," is also untrue. They decided that it was not Hovey's because it had no one character in foliage, flower or fruit, bearing any similitude to Hovey's. Any Yankee child escaped from its cradle, would have come to the same conclusion. Mr. Downing was too shrewd not to feel the effect of so gross an error, and although, as Mr. Longworth says, he never publicly corrected it, as was his duty, he nevertheless gave the most complete proof of his own conviction, by carefully abstaining from any re-assertion of his erroneous position to the time of his death, and always seemed very desirous to keep *shady* on this point. I regret that Mr. M. should deny to him the exercise of ordinary shrewdness, by stating that Mr. Downing could never be made to understand the blunder.

Mr. M. refers also to a wager, but I have offered none. I did offer to pay a certain sum to any one, to do what he had declared he had done with ease, but without any possible gain to myself. Mr. M. should consult a dictionary, and correct his definition, for even poetry becomes foolery when it has no application. Mr. Longworth made an offer for a hermaphrodite produced by cultivation from a pistillate plant. I made an offer for "one perfect berry from Hovey's Seedling grown by itself." Now as all hermaphrodites produce fruit, the result would be identically the same, and as Mr. M. can so easily change pistillates to staminate, "*by being forced slowly in a moderate temperature,*" he ought to set about it at once, and obtain the reward.

In regard to the communication from W. D., it seems very apparent that he has not taken into consideration the fact that the distinctive variations of the strawberry, as staminate, hermaphrodite, and pistillates, constitute the *normal conditions* of the plant, and that consequently any change of the primitive character would be transmuta-

tion of the identical description which he so forcibly rejects, and whose impracticability he has so lucidly expounded.

It can, therefore, bear no affinity to his quoted instance of variation in the "floral organs," arising from luxuriant culture, and their consequent susceptibility to further change.

Large and luxuriant foliage, when resulting from excited vigor, is precisely in accordance with an increase in the size or plurality of the petals, and this increase often renders flowers so double as to usurp the position of the sexual organs, and thereby prevents the production of seeds, but without in any way affecting their sexuality. As well might the development of fatness on a well-fed animal be confounded with a change of his sex.

And whilst on this subject, I would ask of W. D., in his discussion of the sportive results of culture, which are applicable to so many plants, to designate a single instance where it has resulted in a change of sex.

In regard to this question of sexuality, the strawberry is the very last plant that should have been assailed, for so distinct are the natural varieties, that staminate and pistillate plants may be almost invariably distinguished by simply comparing the number of flowers on the scapes, and even by the size of a single flower, without seeing any other part of the plant.

Mr. G. W. Huntsman can tell the sex of more than fifty varieties of strawberries by the leaf alone.

The sexual distinction in the scapes, taken from the same plant, to which W. D., alludes and which I have explained, in a previous paragraph, might well strike a casual observer as an anomaly, when not apprized of its constitutional character, but it could present no excuse to one who has been long pursuing the strawberry culture. And W. D. is greatly mistaken when he says, "It is this kind of change in the character of the flowers which I understand Mr. Meehan to announce as having occurred in plants under his management." Mr. M. says no such thing, but distinctly states that *his pistillates changed to staminates or perfect flowers*, and in fact he had no knowledge when he wrote his first article, that any variety possessed the characteristics of the new seedling from McAvoy; but in May, when he first saw its bloom, he seized upon what he deemed a God-send, hoping it might answer as a scape-goat to sustain him in his erroneous dilemma, and he immediately dispatched specimens to W. D., a highly accomplished botanist, but not specially versed in the varieties of the strawberry, for the purpose of courting his aid, and thus he misled that gentleman, by being first duped himself, in a matter which he ought to have been fully conversant with for a very long period, as the Duke of Kent's Scarlet, and others possessing the same character, originated in his own country, (England,) and are enumerated in the London Horticultural Society's catalogue of 1826, and had been under culture there for many years previous.

It further appears that what Mr. M. speaks of as "*the able article*

of W. D., "which so clearly sets forth his ideas," was in fact based on a mistaken conclusion, from an inspection of the scapes of the new strawberry from McAvoy, sent to W. D., by Mr. M. in May, but which neither party had ever seen a flower of at the time when Mr. M. penned his original communication, which was in the month of March. *Oh! tempora! Oh! Mores!*

It will therefore be seen, that this seeking shelter under the wing of W. D. will not absolutely prove of avail, and neither will the still more astounding circumstance, that the arguments and comments used by W. D. in the July number of the *Farm Journal*, comprising points which Mr. M. had never thought of advancing, are found embodied in an article from Mr. Meehan himself, in the August number of the *Horticulturist*, *as original and without any credit to their author.*

In concluding my comments, I will simply state, that I have cultivated all the important varieties of the strawberry for a long period, and during the last ten years with especial attention, and I have now above one hundred and fifty varieties in my grounds, and yet, after the closest scrutiny by myself, and my neighbor, Mr. Hunstman, we have never been able to discover any sexual variation whatever.

The real causes for the discussions on this subject, have arisen from the rapidity with which runners pass from one bed to another, and the frequency of seedling plants springing up in beds differing from those already growing therein. In fact, you can scarcely go into any garden without finding some accidental mixtures from these causes.

As Mr. M., in his attempt to describe Hovey's Seedling, has shown his utter want of reliable discrimination, I will define its immutable character. Hovey's Seedling is a plant of low growth, and very distinct appearance, remarkable for its large, round, deep, glossy, green, luxuriant foliage; the petioles and peduncles short, the flowers of medium size and not numerous, pistillate, with rudimental abortive stamens, very productive, fruit too well known to need description.

Having now taken some pains to enlighten Mr. M. as to the real facts of the case under discussion I trust he will readily acquit the strawberry plants of all vacillations, and concede that they only existed in the visionary mind of the observer.

Yours most respectfully,

WM. R. PRINCE.

N. B.—Mr. Longworth has just advised me that he has "corrected Mr. Meehan's error about his views of the sexual character of the Extra Red, in *Warder's Horticultural Review*."

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